

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
ANDERSON DIVISION**

AMERICAN WHITEWATER, et al)	
)	
Plaintiffs,)	
)	
v.)	
)	
THOMAS TIDWELL, in his official capacity as)	Civil Action No 8:09-cv-02665
Chief of the United States Forest Service; et al)	
)	
Defendants.)	
)	
)	
)	

I am filing the attached document related to this matter:

DECLARATION OF KEVIN R. COLBURN

DATED: October 15, 2009

NELSON GALBREATH, LLC

s/ J. Nathan Galbreath

Cecil H. Nelson, Jr. (Fed. ID #2511)
J. Nathan Galbreath (Fed. ID #10157)
25 East Court Street, Suite 201
Greenville, SC 29601
(864) 232-3766 : telephone
(864)235-1420 : facsimile
cnelson@nelsongalbreath.com
ngalbreath@nelsongalbreath.com

ATTORNEYS FOR PLAINTIFFS

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
ANDERSON DIVISION**

AMERICAN WHITEWATER,)	
AMERICAN CANOE ASSOCIATION,)	
GEORGIA CANOEING ASSOCIATION,)	
ATLANTA WHITEWATER CLUB,)	
FOOTHILLS PADDLING CLUB,)	
WESTERN CAROLINA PADDLERS,)	
Joseph C. STUBBS, Kenneth L.)	
STRICKLAND, and Bruce A. HARE,)	
)	
Plaintiffs,)	Civil Action No.
)	
v.)	
)	
THOMAS TIDWELL, in his official)	
capacity as Chief of the United States Forest)	
Service; the UNITED STATES FOREST)	
SERVICE, an agency of the United States)	
Department of Agriculture; ELIZABETH)	
AGPAOA, Regional Forester, Southern)	
Region, United States Forest Service;)	
MONICA J. SCHWALBACH, Acting)	
Forest Supervisor, Francis Marion and)	
Sumter National Forests; MARISUE)	
HILLIARD, Forest Supervisor, National)	
Forests in North Carolina; GEORGE M.)	
BAIN, Forest Supervisor, Chattahoochee-)	
Oconee National Forests; THOMAS)	
VILSACK, in his official capacity as)	
Secretary of the United States Department of)	
Agriculture; the UNITED STATES)	
DEPARTMENT OF AGRICULTURE,)	
)	
Defendants.)	

DECLARATION OF KEVIN R. COLBURN

My name is Kevin R. Colburn. I am the National Stewardship Director of American Whitewater. My areas of expertise include collaborative natural resource management, recreational in-stream flow studies, the ecology of large woody debris in streams, restoration ecology (emphasis on riparian areas and rivers), and certain aspects of recreational management.

The comments below are my review of the August 2009 “Environmental Assessment Managing Recreation Uses on the Upper Chattooga River” (the “EA”)(COLBURN Ex. 1.) and the Regional Foresters’ Decisions (the “2009 Amendment”)(COLBURN Ex. 2.). My comments are based on my research of technical and/or peer-reviewed literature and eight and one-half years involved in the management of the Chattooga and other rivers dealing with issues such as: management of Wilderness and Wild and Scenic Rivers; user capacity analyses; matters relating to recreational conflicts; solitude; and the impacts of fish stocking.

Credentials

I obtained a Master of Science Degree in Environmental Studies from the University of Montana in 2001. My thesis was focused on the ecological role of Large Woody Debris in stream recovery and restoration, and my coursework included aquatic ecology, environmental policy including the Wilderness Act and Wild and Scenic Rivers Act, and environmental ethics and the concept of place.

I obtained a Bachelor of Science in Environmental Studies from the University of North Carolina at Asheville in 1998. I conducted undergraduate research on turtles at a Southern Appalachian wetland and stream restoration site, where I also worked for over 2 years as a field ecologist collecting data on hydrology, soils, and other aspects of the area. My undergraduate coursework included plant ecology, soils, zoology, botany, math, and other aspects of environmental science.

I was hired by American Whitewater in May of 2001 to work on eastern river conservation and access issues out of an office in Asheville, North Carolina. Through collaborative interest-based processes, I spent three years in North Carolina negotiating complex settlement agreements resolving many ecological and recreational issues associated with the management of dams on the Cheoah (NC), Nantahala (NC), Tuckasegee (NC), East and West Forks of the Tuckasegee (NC), and Catawba rivers (NC/SC). As part of these processes I played an integral role in the development and implementation of controlled recreational instream flow studies that are designed to determine the minimum acceptable, optimal, and high challenge flow ranges for whitewater boating. These studies also addressed angling and environmental elements.

In 2004 I moved to Idaho where I took on additional national policy and western responsibilities, and then to my current office in Montana two years later. I have worked on many complex river management negotiations including flows and access on the Ocoee (TN), Hiwassee (TN), Tallulah (GA), Bear River (ID), West Rosebud Creek (MT), Ausable (NY), Youghiogheny (MD), and others. I have also assisted with the management of river access areas owned by American Whitewater in North Carolina, West Virginia, and Kentucky. I have worked on national policy issues such as hydropower reform, Forest Service roadless area protection, and other river conservation initiatives. I have played a supporting role in the designation of rivers as Wilderness and Wild and Scenic.

I have been an active member of the River Management Society (RMS) since 2002, attending and presenting at related conferences. In 2007 I presented and participated on a RMS panel discussion with the Forest Service on the management of Large Woody Debris in rivers as it

relates to recreation. In 2003 I gave a presentation on collaboration with Trout Unlimited at the “Partners in Stewardship” conference hosted by the National Park Service.

I have significant first-hand knowledge of whitewater boating resources in the Southern Appalachians, particularly Western North Carolina, and contributed significantly to the current guidebook for the region, North Carolina Rivers and Creeks, by Leland Davis. I have visited all upper Chattooga access areas, and hiked several portions of the river.

I have been the American Whitewater project manager for the Chattooga River issues since 2001. I believe I have read all available Forest Service publications regarding the Chattooga River. I have organized several Freedom of Information Act requests regarding the Chattooga River, and I have reviewed the government’s responses to these requests. Since 2001, I have been conducting exhaustive reviews of Forest Service documents related to the Chattooga River, and I have regularly prepared detailed comments to these Forest Service documents.

The Environmental Assessment Relied On By The Southern Region Forest Supervisors In The August 2009 Decision Is Incomplete And Flawed

I. The stated biophysical justifications relied on by the USFS for its imposition of the Floating Ban are not persuasive and are not based on adequate information:

A. The USFS chose to collect inadequate data.

In the EA, the USFS opined at length about the potential biophysical impacts of allowing paddling to occur on the upper Chattooga River, however they have no basis in the record for these opinions. The USFS allowed only 2 days of paddling to occur during its 4.5 year long study. In those two days, and over the 4 years, it failed to document a single biophysical impact of paddling. Paddlers did and would access the river at existing high use access points at bridges, with the exception of the access to the uppermost reach to which the USFS artificially and unnecessarily required trail access. Once on the water they traveled downstream with only two mandatory portages and perhaps 2-3 more optional portages, all of which were made on bedrock in the streambed. There was no documented erosion caused, and no impact to vegetation or animals. The USFS has no basis whatsoever for their opinions about the biophysical impacts of paddling. Furthermore, non-commercial paddling is limited on no other river or stream in the region for biophysical reasons and the USFS offers no evidence of significant impacts where paddling use regularly occurs.

B. The analysis was biased against paddling in a manner that exaggerates potential biophysical impacts of paddling and downplays other impacts:

(1) The EA weighs exotic species and their potential future effects over certain current benefits of nature based paddling.

USFS voices concern in the EA that the exotic Hemlock Woolly Adelgid will cause significant mortality in hemlocks along the Chattooga River over the next five to ten years. It then

postulates that those trees will fall into the river and impede paddlers, possibly causing an increase in portages.¹ The agency then postulates that this increase in portage trails could have impacts on vegetation, but in all of the management alternatives, the USFS bans the removal of fallen trees from the river. Thus through its own rules, the agency is creating a situation where portage would sometimes be necessary. The logic of this management approach is flawed for several reasons. The comments of American Whitewater (COLBURN Ex. 4.) addressed the deficiencies in the Inventory of Large Wood in the Upper Chattooga River Watershed, but these comments were not taken into account in the final EA.

First, the USFS erroneously assumes that the introduction into the Chattooga River of large amounts of trees killed by an introduced exotic species is beneficial for the river. This is not a safe assumption. The USFS admits that the amount of wood currently in the river is meeting standards and ecological needs. EA p. 101. An artificial introduction of additional wood would be neither natural nor necessarily beneficial for the river or its Outstandingly Remarkable Values (“ORVs”). The USFS must protect and enhance the Wild and Scenic Chattooga River’s ORVs. Allowing an exotic species to directly impact the river and its recreational use is not compliant with the WSRA.

Second, and perhaps more significantly, the USFS makes the assumption that logs in the river require portage. In what is likely the most definitive study ever completed on this topic, a USFS analysis proved otherwise. The USFS hired an expert team to count every single piece of wood on the entire Upper Chattooga and its forks.² The team found that:

- The Upper Chattooga (where wood has never been moved or removed by paddlers) has 4,171 pieces of wood and only 2 wood-related portages. Therefore only 0.02% of wood is potentially a recreational issue.
- Overflow Creek where boating has been popular for decades has essentially the same average amount of wood as the Upper Chattooga (where no boating has occurred).
- Recreationists (on streams with and without boating) only managed “several” pieces of wood out of 8,322 total pieces. Ecologically, and in the context other accepted recreational impacts, this miniscule effect is not significant.

The USFS has proven that wood in the Chattooga River and rivers in general, is simply not a significant issue for recreational paddlers. Even if the amount of wood doubled based on the Hemlock Woolly Adelgid, the number of portage trails would on average only increase to four on the entire 21-mile stretch of the Upper Chattooga.

¹The word portage as it refers to paddling is the act of carrying a boat, raft, canoe, or kayak around an obstacle in the water. Portage can also refer to the path one uses to carry their boat around the obstacle.

²Inventory of Large Wood in the Upper Chattooga River Watershed, USFS (COLBURN Ex. 3.)

(2) **The EA and 2009 Amendment overlook significant biophysical impacts from other uses that make any paddling impacts pale in comparison:**

(a) **Stocking of fish have significant widely recognized impact.**

The state fishing agencies, the USFS, and various local angling groups work closely to plan, fund, and implement a massive program of stocking exotic non-native trout in the upper Chattooga River. The Shelby and Whittaker (2007) report (COLBURN Ex. 5.) states that the number of exotic trout stocked in the upper Chattooga annually is roughly 70,000:

In recent years, South Carolina DNR [Department of Natural Resources] used truck stocking each May to October to place roughly 40,000 rainbow and brown trout adults (9 to 12 inches in length) into the Chattooga at Burrells Ford, the mouth of Reed Creek to Hwy. 28, and between Highway 28 and Long Bottom Ford. Georgia DNR and SCDNR work cooperatively with USFS to stock an additional 32,000 sub-adult rainbow and brown trout into the backcountry area from Burrells Ford downstream to the mouth of Reed Creek (see backcountry fishing below). Taken together, over 70,000 trout are stocked into the Chattooga River.

Stocking has included rainbow and brown trout, but sampling shows that brown trout are more abundant. However, creel data suggest most caught fish (>70%) are rainbows, highlighting “conventional wisdom” that browns are harder to catch, and that rainbow provide the primary fishery for most anglers.

And

The fishery from *Burrells Ford downstream to Reed Creek* relies largely on helicopter stocking. GDNR and SCDNR work cooperatively with USFS to stock 16,000 sub-adult (under 7 inches) rainbow and 16,000 sub-adult brown trout into this backcountry area (Rankin, 2007). About 1,000 of each species are over 12 inches. Shelby and Whittaker (2007) p. 19.

This stocking is conducted at least in part through a cost-share agreement with Trout Unlimited and the state agencies. One such 5-year agreement, signed in 2004 states that:

TU (Trout Unlimited) Shall: Provide funds to pay for one hour of helicopter operation in fall and for one hour of helicopter operation in the spring for five years. The helicopter will be used to stock rainbow and/or brown trout in the West Fork Chattooga River and/or the Chattooga River...

TU Shall: Make an annual advance payment of \$1,500 payable to the USDA Forest Service for FY 05 with payments for future years negotiated on an annual basis.

The [US]FS Shall: In the fall and spring of each year, plan and schedule the stocking date, location and other details necessary to carry out the trout stocking of the West Fork Chattooga River and the Chattooga River and relay this information to the Georgia Department of Natural Resources who shall supply the trout.

The [US]FS Shall: Assume responsibility for assembling all equipment and materials to the project site by the scheduled stocking day.

The [US]FS Shall: Provide technical personnel at the project site on the scheduled workday.³

In summary, the anglers pay for the helicopter and the state agencies provide the fish, but it is the USFS that is overseeing and in charge of the stocking.

The USFS accepts that this stocking program significantly increases recreational use and impacts on the upper Chattooga River, but the agency fails to consider that there are ecological and social impacts of the stocking program itself. American Whitewater is not opposed to stocking fish, indeed many paddlers are also anglers. However the USFS's one-sided solution regarding the potential, unproven, and miniscule effects associated with allowing paddling to occur on the upper Chattooga while explicitly supporting the massive, proven, and artificial impacts of the fishery the agency created and maintains is unwarranted. The USFS bond with this artificial fishery is so strong that the USFS did not consider a single alternative to the stocking program, or an immediate and direct limitation on access for anglers.

Section 1284(a) of the Wild and Scenic River Act states: "Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations."

While the WSRA states that fishing shall be permitted, the statute in no way limits the USFS's authority to limit angler numbers. Thus, despite having the authority to limit stocking and access for anglers, the USFS arbitrarily and capriciously ignored these options in its analysis.

Indeed the USFS acknowledges that the agency has a role in fish stocking on the Chattooga River. In response to a Freedom of Information request, the agency provided a document which states:

The [US]FS is a land management organization dedicated to wise management of the Nation's natural resources and is interested in providing to the public a variety of goods and services including a resource for fishing. The [US]FS has the responsibility to manage, protect, and enhance these fisheries resources and is

³From: Challenge Cost Share Agreement between The United States Department of Agriculture Forest Service and Rabun County Chapter of Trout Unlimited. Signed 11/23/04 (COLBURN Ex. 6.)

willing to develop projects that will assist in providing fishing in remote areas such as the West Fork Chattooga and the Chattooga River.

The reason behind the agency's failure to consider limitations on fish stocking or angling as one of its alternatives may be attributed the agency's close relationship with anglers and the state fishing agencies. For example, the Chattooga Coalition's membership includes USFS staff from NC, SC and GA, personnel from the fisheries/fishing agencies from all three states, and the SC and NC chapters of Trout Unlimited. In fact, the founder and Chairman of the Chattooga Coalition, Monty Seehorn, is a retired USFS staff and a member of the Rabun Chapter of Trout Unlimited.

Together, these groups work to "give special emphasis to protection and enhancement of the fishery resources, water quality, and overall health of the Chattooga River and its tributaries." In no small part their focus is to protect and increase the stocking of massive numbers of exotic trout via trucks and helicopters. The website for the group states that their objectives include developing stocking recommendations.⁴ For example:

Put and Grow' Management w/helicopter stocking of 40,000 sub-adult trout in 22 drops every fall. The results are Excellent! The increased numbers of trout provide an excellent catch rate. The rainbows provide a good daytime fishery. The browns provide more 'hold over' potential. The [Chattooga] Coalition is responsible for the restoration of this backcountry fishery resulting in better quality than it was in 1970 (35 years ago). *Id.*

The Coalition's defense of the stocking program is so ardent that the Coalition formally opposed Wilderness designation for the Rock Gorge because it would end the helicopter stocking:

In 1995 the Wilderness Society and Sierra Club identified the Upper Chattooga backcountry section (between Reed Creek and Burrell's Ford) as a prime candidate for designation as a Wilderness Area. This designation would bring to an end the 'Put and Grow' fisheries management with helicopter stocking. The new Forest Management Plans for both Sumter NF and Chattahoochee NF placed this area in "backcountry" prescriptions. The Coalition supported the allocation of the "backcountry" prescriptions to this beautiful wild area. *Id.*

In a 1997 letter to the TU membership, the Rabun Chapter of TU warned its members that "The wilderness designation precludes stocking of any kind, including helicopter stocking, so put-and-grow fisheries would be put to an end." Therefore TU concluded it "would like to have the status quo maintained and feel the proposed changes (i.e., Wilderness Designation) would in

⁴<http://www.saludatu.org/Chattooga.cfm> (COLBURN Ex. 7.)

fact be detrimental.”⁵

Perhaps the most vocal opponent of boating on the headwaters, who is associated with a local angling group, posted on an angling message board:

The USFS Rolling Alternative recommends the area for prescription 12.A. REMOTE BACKCOUNTRY RECREATION - FEW OPEN ROADS, which would allow the continuation of the GA & SC managed fishery program while protecting the area from logging and road building. I felt that this would be common ground that would fit the needs of the "preservationists". However, the WILDERNESS proponents are turning out in large numbers and are vocal in their attempt to have the area "preserved" permanently as designated WILDERNESS, ending fishery management. They either don't care or don't acknowledge that it will result in the loss of another trout fishery. Their reason for opposing REMOTE BACKCOUNTRY RECREATION designation is that it will come up for review every 10 or 15 years and WILDERNESS is permanent, not subject to review.

Due to warmer water and competition from non-trout species of fish, natural trout reproduction does not occur in the river below Big Bend Falls (about 2 miles below Burrells Ford). As you may already know, the GA TU Council, the SC TU Council, SE Region TU VP (Ray Mortensen), The Chattooga River Coalition (Monte Seehorn's group) are all on the record by letters to the USFS in both states in favor of the "Backcountry" option. Remember, we can't have it both ways. If it is designated "Wilderness", there can NOT be an exception to allow the continuation of the sub-adult Rainbow and Brown trout "put and grow" fall helicopter stocking program. It can NOT be written into the legislation, it is in conflict with the "Wilderness Act".

I think that we, as individuals, need to let our opinions be known. This is, without a doubt, the biggest threat to the future of the Chattooga River trout fishery.”⁶

The Chattooga Coalition also opposes boating on the upper Chattooga. In 2009, Don Eng, who signed the 1985 Sumter National Forest Plan, the document that bans paddling on the upper Chattooga River, was honored with the SC Trout Unlimited 2008 “Palmetto Trout Award.” The award notice states:

Don was instrumental in helping to fund and in actively supporting with staffing the three year macro-invertebrate and other studies of the Chattooga River in the 1980's. That multi-agency project with TU and the state fisheries agencies of SC,

⁵<http://www.geocities.com/yosemite/5696/fn0297.htm> (COLBURN Ex. 8.)

⁶Doug Adams, Director Rabun Chapter of Trout Unlimited. 11/8/99. <http://www.georgia-outdoors.com/forum/archive/index.php/t-44999.html> (COLBURN Ex. 9)

GA and NC gave impetus to the 'Chattooga Coalition' of agency and advocate groups which still meets and works together to improve the trout fishery of that national wild and scenic river.

In addition to his support throughout his career with the US Forest Service, Don was one of 12 charter members along with Malcolm when the Saluda River Chapter was formed in 1982. Over the years, Don served in many chapter roles, including a term as chapter President, and also as a SC TU Council chapter delegate for more than 10 years.⁷

That personal involvement from a federal resource agency leader was noteworthy as it demonstrated Don's strong personal convictions about protecting and enhancing coldwater fisheries. These statements demonstrate the unified interests of those that fish, those that stock, and those that manage the river. It is a collaborative relationship, and also a financial one, with each of the three groups sharing resources to maintain this artificial attraction.

Regardless of the motivations, the fact remains that the USFS does not consider the environmental and social impacts of stocking massive numbers of exotic rainbow and brown trout in the Wild and Scenic Chattooga River. The fact that stocking is not adequately addressed in the EA is a further indication of its bias. The EA contains numerous references to the unique experiences for anglers and the high quality of the fishing as justifications for banning boating so as to not interfere with those anglers. If the EA took into account the number, age and size of the fish that are stocked, the methods by which they are stocked and that fact that the fish being stocked are non-indigenous, the EA would have to reach a far different conclusion about the value of the angling on the Upper Chattooga. American Whitewater does not believe there is any evidence to justify a ban on any lawful recreational activity on the Upper Chattooga. However, if the Forest Service were to conclude that it is necessary to limit some uses on the Upper Chattooga, it would be a logical step to conclude that boating should be allowed and fishing should be indirectly limited by providing only natural fish species and numbers.

(3) The EA failed to consider the impacts associated with fish stocking

American Whitewater's May 7, 2007 Comments on the Chattooga, *Literature Review Report*, outline numerous proven ecological impacts associated with stocking.⁸ American Whitewater raised these issues in its scoping comments and elsewhere in the record, but these issues were not addressed in the EA, thus violating NEPA.

(a) Impacts on native trout

⁷<http://www.chattoogatu.org/February2009.pdf> (COLBURN Ex. 10.)

⁸ Comments on the Chattooga, *Literature Review Report*, American Whitewater, May 7, 2007. (COLBURN Ex. 11.)

The USFS has stated a goal in the EA of protecting and restoring native brook trout in the Chattooga River watershed.

Of particular concern is the brook trout, the only salmonid native to the Southern Appalachian Mountains. The South Carolina Department of Natural Resources (SCDNR) has documented the complete loss of some brook trout populations and significant loss of range in recent years. Recent survey data and historical records indicate that in South Carolina, brook trout range has also declined at least 70 percent. Remnant populations are found in only six streams on the Andrew Pickens Ranger District. EA p. 17.

According to the USFS, this goal is one of the reasons that form a basis for severely limiting boating on the river and its tributaries, but the agency offered no hard data that showed that paddling could cause any significant impacts to the river and its tributaries. Indeed, paddling occurs on many brook trout streams across the Southern Region and nowhere has an agency found paddling to be incompatible with brook trout persistence or recovery. While focusing on, and managing for, an impact that does not exist, the USFS has turned a blind eye to the significant and widely known impacts on native brook trout caused by the artificial stocking of exotic rainbow and brown trout – a practice they enthusiastically support.

It is widely accepted that the replacement of native brook trout by non-native rainbow trout in the majority of their historic habitat in the Southern Appalachians is caused in large part by the stocking of rainbow trout. Removing rainbow trout from streams results in increases in brook trout numbers.⁹ USFS officials acknowledge these facts and have poisoned streams to remove rainbow trout for the purpose of protecting brook trout:

All of the activities covered in this decision (which include stream poisonings) are needed to improve brook trout dispersal throughout streams, restore brook trout where they no longer exist and to reduce nonnative rainbow and brown trout competition among existing brook trout populations. Since it has been proven that brook trout cannot compete with non-native trout species, the streams proposed for restoration and rehabilitation will no longer be stocked with the above mentioned non-native trout species.¹⁰

The USFS decision to limit floating based on unfounded concerns about hypothetical, miniscule impacts to brook trout, and to ignore the obvious and significant impacts of the USFS sanctioned

⁹ Declaration of Mark Bain, Oct. 8, 2009 (“Bain Decl.”) See Complaint of American Whitewater, et al. October 14, 2009, U.S. District Court, District of South Carolina, Anderson Division

¹⁰ David W. Jensen, *Decision Memo for Brook Trout Habitat Enhancement*, February 09, 2007. (COLBURN Ex. 12.)

fish stocking program, is arbitrary and capricious.

(b) Impacts on rare vertebrates and invertebrates

The USFS raised numerous unfounded concerns that paddling may effect rare species – an effect that is mentioned nowhere in the literature, and that was never documented during the four year analysis period. At the same time the USFS enthusiastically supports the stocking of tens of thousands of exotic trout annually that are known to eat organisms like these native rare species.

Rainbow trout feed on invertebrates, other fish, and fish eggs. Goldstein and Simon 1999. Specifically, rainbow trout eat caddis flies, stoneflies, mayflies, crane flies, crayfishes, salamanders, and frogs. They also eat terrestrial prey that falls into the river including earthworms, beetles, butterflies, moths, bees, and wasps. Needham 1969; Johnson 1981; Cada et al. 1987.

The USFS lists sixteen forest-listed locally rare aquatic species in the Chattooga vicinity in EA, Table 3.2-21. These sixteen locally rare species include one salamander species, two crayfish species, eight insect species, and five species of fish. All of these locally rare species are potential food for the stocked exotic trout. While attributing an unknown impact from floating onto these species, the USFS failed to even consider the readily foreseeable impact of its own stocking program.

The impact and harm to native and rare species was recently recognized by a state court in California. In *Pacific Rivers Council v. California Department of Fish and Game*, the court stated “there is little doubt that...respondent’s fish stocking program has significant environmental impacts on the aquatic ecosystems into which hatchery fish are introduced, and, in particular, on native species of fish, amphibians and insects, some of which are threatened or endangered.”¹¹

(c) Impacts of the Walhalla Hatchery

The USFS acknowledges several places in the EA that “The Wild and Scenic Rivers Act requires that the managing agency “protect and enhance” the free flowing condition, the *water quality* and the ORVs of designated rivers. EA p. 3 (emphasis added). The USFS voiced unfounded concerns about the potential impacts of paddling on water quality, but it supports the operation of a large scale fish hatchery in the watershed and fails to consider the likely impacts of this hatchery on the river’s water quality.

The EA lists the “East Fork and The Chattooga River (Downstream of Fish Hatchery)” as an “Upper Chattooga Reach of Concern” that is only partially supporting beneficial uses. There is little or no development in the entire East Fork Watershed, and it would be unreasonable to

¹¹ *Pacific Rivers Council v. California Department of Fish and Game*, No. 06-CS-01451, Order Modifying Judgment (COLBURN Ex. 13.)

assume the hatchery is not contributing to the water quality impacts.

Studies have shown a direct and measurable link between the operation of salmonid hatcheries and diminished water quality.¹² Other states have determined that:

All fish culture stations discharge wastewater that contains a limited set of metabolically generated waste products. The major waste products include phosphorus, nitrogen, solids and carbon dioxide. Fish metabolic activity also consumes oxygen and increases the biochemical oxygen demand in the wastewater.¹³

Ignoring these collateral impacts of the artificial Chattooga River fishery fails to protect the river from these recreational impacts and places other recreational impacts in a false context. The EA is deficient in not addressing these known recreational impacts.

(4) Angling has significant and unique impacts

While stocking to support angling is in itself environmentally destructive, angling in and of itself has its own impacts on native plant and animal species.

(a) Impacts on brook trout:

Unlimited numbers of anglers fishing the Upper Chattooga River and its tributaries are allowed to catch and kill four brook trout each per day based on state regulations and USFS management,¹⁴ while the USFS bans paddling in part because of unproven concerns related to brook trout.

(b) Impacts on riparian communities:

The USFS estimates that the access rate for the Nicholson Fields reach solely by anglers is about three anglers at one time Monday through Friday, and eight anglers at one time on Saturday and

¹²Kendra, W. Quality of Salmonid Hatchery Effluents during a Summer Low-Flow Season. Article in Transactions of the American Fisheries Society 120:43-51, 1991. Abstract "Ecology assessed the quality of salmonid hatchery effluents and receiving water streams in Washington State during the 1988 summer low-flow period. Relative to hatchery influent waters, effluents showed significant increases in temperature, pH, suspended solids, ammonia, organic nitrogen, total phosphorus, and chemical oxygen demand. Wastewater discharges sometimes violated state water quality standards; effects were exacerbated by low dilution. Hatchery nutrient loads equaled or exceeded receiving water loads; effects of enrichment were most evident in oligotrophic waters. Benthic invertebrates sensitive to organic waste were often replaced by pollution-tolerant forms in the vicinity of hatchery outfalls. Survey findings necessitated revision of existing hatchery wastewater discharge permits in Washington."

¹³http://www.fish.state.pa.us/promo/fishpro/execsumm_15-22.pdf (COLBURN Ex. 14.)

¹⁴See http://www.ncwildlife.org/Regs/2009_10/2009_10_Inland_Fishing.pdf and http://www.ncwildlife.org/Fishing/Trout_Fishing_Maps.htm (COLBURN Ex. 15.)

Sunday. The resultant effect on the landscape is 6.5 miles of user-created trails and 27 points of erosion in a short river reach that is between 3 and 4 miles long. This is 1.7 miles of user-created trails per mile of river. Similarly, the second most heavily stocked reach has the second highest ratio of user-created trails to river miles. See the reproduced Table 3.1-5 from the EA below:

Table 3.1-5. Summary Of Existing Trail Information For The Entire Upper Chattooga River Corridor (All Reaches And For A Distance Of ¼ Mile On Both Sides Of The Chattooga River).

Reach	Designated Trail (mi)	User-created Trails (mi)	# of Erosion Points	User-Created Trail Miles per River Mile	# Erosion Points per Trail Mile	# Erosion Points per River Mile
Chattooga Cliffs	6.1	1.9	3	0.4	0.375	0.6
Ellicott Rock	13.4	2.5	17	0.5	1.1	3.2
Rock Gorge	11.1	8.4	44	1.1	2.5	6.0
Nicholson Fields	4.4	6.5	27	1.7	2.1	7.1
Total	35	19.3	91	n/a	n/a	n/a

Sources: USDA 2007 and Whittaker and Shelby 2007

What is also clear is that angling trails have a unique impact on the river, because they travel adjacent to the river and in the riparian corridor. The table below reproduced from the EA exhibits this impact.

Table 3.1-6. Summary Of Trail Information For Existing Trails Within 20 And 100 Feet Of The Chattooga River (All Upper Chattooga Reaches).

Reach	Designated Trails Within 100 ft of River (mi)	User-created Trails Within 100 ft of River (mi)	Designated Trails Within 20 ft of River (ft)	User-created Trails Within 20 ft of River (ft)
Chattooga Cliffs	1.7	0.3	1,300	360
Ellicott Rock	2.6	1.2	1,580	1,033
Rock Gorge	3.8	2.4	3,536	2,901
Nicholson Fields	0.9	5.9	0	3,170
Total	9	9.8	6,416 ft (1.21 mi)	7,464 ft (1.41 mi)

Sources: USDA 2007, and Whittaker and Shelby 2007

The large mileage of user-created trails within 100 feet, and 20 feet of the river in the Nicholson Fields reach, where use is predominantly angling, is evidence of the unique biophysical impacts of angling. These impacts are directly correlated to fish stocking.

C. Boating Access will not cause significant or unique biophysical impacts.

(1) Boating has no significant and/or cumulative biophysical impacts.

(a) Boating has no significant and/or cumulative impact on plants.

During the four year analysis period, the USFS did not document a single impact of paddling on plants. Nowhere else in the region, where unlimited paddling occurs on similar streams, have paddling impacts to plants been documented. Regardless, the USFS goes to great lengths in the EA to describe which plants live in the river corridor, and which plants “might” be impacted by

several hundred paddlers floating down the river or making the occasional portage.

The agency's logic is roughly as follows:

- **If** an insect kills a Hemlock tree,
- **and** that tree happens to fall across the river,
- **and** that tree is one of the 0.02% in the river requiring paddlers to portage,
- **and** that portage must take place on the edge of the river (as opposed to the middle of the river or high on the bank),
- **and** that portage happens to be in the exact location of a rare plant,
- **and** the paddlers happen to step on that plant,
- **and** those steps do not benefit the plant by encouraging dispersal and reproduction through fragmentation which is common among riparian plants including liverworts and lichens.
- **and** those steps are so damaging that they kill the plant,
- **then** there will an impact of paddling on rare plants, and the more paddlers traversing the river the greater the impact.

There is an obvious problem with this logic: the odds of this occurring, no matter how many paddlers traverse the river, are insignificant and miniscule. Furthermore, the USFS proposes mitigation measures to negate any paddling impacts, making the whole discussion moot. What the USFS acknowledges and then ignores are the tens of thousands of hikers and anglers that take advantage of unlimited access to the river, including wading and swimming in the river:

Recent studies have shown that existing users are already affecting vegetation along the corridor by trampling and clearing vegetation around campsites, erosion and loss of plants along user-created trails, damaged trees, denuded banks at stream crossings and the potential for damage to rare species in sensitive settings along rock cliffs and gorges. EA p. 56.

And

Current recreation use in the upper corridor is causing numerous areas of vegetation damage including trampling and clearing of vegetation around campsites, erosion and loss of plants along user-created trails, damaged trees and bare banks at stream crossings. Existing impacts to rare species from current use are unknown. EA p. 64.

And

Proposed, Endangered, Threatened and Sensitive species (“PETS”) and Locally Rare Plants – Direct, Indirect and Cumulative Effects:

All users potentially could affect these 28 plant species.

And

Seven of these sensitive plant species could have individuals impacted by any one of the eight alternatives. These species occur in more accessible corridor areas and could be trampled or crushed with existing and/or increased recreational usage. EA p. 72.

The USFS proposes no actions to curb these potential impacts of other users. Instead it continues to focus on paddling’s “potential” effects, which it admits can be easily mitigated. After an exhaustive discussion of potential paddling effects on plants, the USFS acknowledges that:

...none of the alternatives are anticipated to result in the loss from the corridor of any existing species, provided the monitoring measures are implemented and future decisions regarding portage trails adequately assess and avoid impacts. EA p. 56.

The USFS has failed to document a single impact of paddling on plants in the Upper Chattooga River corridor, or on any other regional stream. If impacts did occur, the impacts would pale in comparison to those of land-based visitors seeking river access for swimming and angling, the impacts from floating would be easily mitigated, and would not be significant.

(b) Boating has no significant and/or cumulative impact on animals and the related analysis is biased

Perhaps nowhere in the entire USFS analysis is the bias against paddlers so evident as in the analysis of wildlife impacts. The analysis concludes that:

Current management appears to be providing for conservation of rare wildlife species known to occur in the corridor, as *there has been no documentation* which links "declines" of rare species to the current management of the upper Chattooga River. EA p. 78.

Yet, when the USFS discusses potential paddling impacts, for which there are also no documented impacts, it reaches a very different conclusion:

There are relative differences among the boating alternatives; however, in general, those that have the greatest restrictions on the number of boatable days (Alternative 4) and avoid extensive use of the upper reaches of the corridor where

most of the rare species are located (Alternative 5) would likely result in fewer impacts on wildlife. EA p. 78.

Here, the USFS is blatantly applying two different standards - one to paddlers, and one to everyone else. Paddlers are presumed guilty until proven innocent - and are not even given a chance to be proven innocent, while all other uses are assumed innocent until proven guilty. Furthermore, the USFS infers that there is a relationship between the number and location of paddlers and wildlife impacts that somehow does not also apply to other visitors. The USFS offers no defense of, or basis for, this assertion.

A similarly biased view is expressed regarding the impact of newly created trails associated with the vastly larger and faster growing uses of hiking and angling, compared with the impacts associated with paddling. When considering existing uses, uncertainty regarding user-created trails results in a finding of no impact:

Although new trails and campsite construction/relocation, if not carefully planned, could affect rare species, this is not assumed to be the case since any new actions must adhere to project-level NEPA analysis. Overall, the proliferation of user created trails and campsites could affect rare species in the future, but the exact effect is unknown, since the proliferation of user created trails is sporadic and unpredictable. EA p. 88.

When the USFS similarly considers effects of user created trails associated with paddling it finds that uncertainty must result in an assumed impact.

Potential direct and indirect effects [of paddling] to sensitive and locally rare species include trampling and disturbance from increased user densities. Impacts to habitat for sensitive and locally rare species include creation of portage trails and new access trails and increased trampling and disturbance to plants. Based on the uncertainty (in amount, time and location) associated with some of the effects resulting from this alternative, such as portage trails, it is unreasonable to assume this alternative will have no effect on rare species. EA p. 88.

If the USFS analysis were unbiased, the USFS could not possibly have reached the conclusion that it would be “unreasonable” to assume a trail created by paddlers has no impact, yet at the same time assume a trail created by an angler or hiker has no impact.

Regardless of the inherent bias in the analysis, in its findings the USFS reached the conclusion that allowing paddling would not have significant or cumulative impacts on wildlife.

As with other alternatives, although some individuals may be directly or indirectly impacted, it is not likely that this alternative [Alternative 8 - maximum paddling], when combined with other past, present and future management actions on both public and private land, would have a cumulative effect on the population viability of rare species. EA p. 89.

Throughout the 4.5-year user capacity analysis, the USFS failed to document a single impact of paddling on wildlife. No studies anywhere else in the region have found that paddling has any impacts on wildlife. Paddling is not limited on any other river in the region based on concerns about wildlife impacts. The USFS simply has no basis for their claims that paddling has any impacts on wildlife that are distinct from impacts of any other type of use.

(c) Boating has no significant and/or cumulative impact on woody debris

Throughout the EA, “LWD,” standing for “Large Woody Debris” is found 105 times. Pages upon pages are devoted to LWD. However, removal of LWD is prohibited in all action alternatives (except 2 and 3), so LWD is a non-issue. Still the EA considers the impacts that “unauthorized removal” of wood might have. They do not at the same time consider the impact of unauthorized removal of fish, damage to rare species, camping, trail creation, ATV use, or other recreational misdeeds. The USFS selects only boaters as presumed rule-breakers. This is unfair, inequitable, biased, and indefensible.

American Whitewater commented at length on LWD in the *Inventory of Large Wood in the Upper Chattooga River Watershed*, March 25, 2008. American Whitewater found absolutely no justification for limiting boating based on LWD – and neither has the USFS. The USFS has found that the Upper Chattooga (where wood has never been managed by paddlers) has 4,171 pieces of wood and only 2 mandatory wood-related portages. Therefore only 0.02% of wood is potentially a recreational issue. The USFS has generated – and in the EA ignored – conclusive data that shows boating would have no impact on wood in the Chattooga River.

To limit boating based on concerns about unauthorized removal of LWD is not justified, just as it would be to ban all angling because some anglers might fish without a license. Furthermore, wood removal was shown in the *Inventory of Large Wood in the Upper Chattooga River Watershed* to be carried out by non-boaters on the Upper Chattooga—a logical conclusion because boating has been banned. Thus, any decision to ban or limit boating based on concerns about unauthorized removal of LWD by boaters without banning or limiting other uses known to remove LWD would be inequitable. LWD is simply not a significant management issue on the Upper Chattooga.

While the USFS infers at least that paddlers may impact habitat created by Large Woody Debris, they have banned the removal of woody debris, acknowledged that current wood amounts meet standards, and proved that only 0.02% of wood pieces are a recreational impediment. In the four-plus years of their analysis they have shown no need for wood removal on the Upper Chattooga. In addition, paddling is not limited because of concerns regarding Large Woody Debris anywhere in the region. While the USFS in this instance is arbitrarily creating a standard of zero wood removal for the purposes of recreational passage, this is far from the agency standard. In fact the USFS regularly allows and conducts the limited movement of wood in streams in general forest lands, Wilderness areas, and Wild and Scenic Rivers, in order to support public enjoyment.

(d) Boating has no significant and/or cumulative impact on riparian areas via trails or erosion

The USFS grossly overestimates trail and access needs of paddling, while at the same time discounting the needs as insignificant. In the EA, Table 3.1-18, *Estimated Length Of Trail Features Reconstructed Or Created In The Upper Chattooga For Alternatives 4, 5, 8, 9, and 10, As A Result Of The Addition Of Boating* misrepresents the reality of access and trail needs of paddlers in the following ways.

- **River Access:** The USFS states: “Alternatives range from a total of 3-7 put-ins and take-outs; each estimated to be ¼ mile in length for up to a total of 1-2 miles of trail depending on Alternative.” The USFS fails to note that all river access needs can be accommodated at existing bridges with nearby parking. There are absolutely no additional facilities or trail needs to accommodate river access. Paddling use at these popular locations will be orders of magnitude smaller than other uses.
- **Norton Mill Trail:** The USFS claims that 1.5 miles of old roadbed would need to be converted to a trail to provide access. Access via this trail is totally unnecessary and no improvements are needed. Paddlers will access this river point by putting in upstream at Grimshawes Bridge as was intended by Congress at the time of Wild and Scenic designation.
- **Portage:** The USFS contends that ½ miles of portage trails will be required, but the agency admits that existing user-created trails would be used for portaging. During the one descent of the river allowed by the USFS during the user capacity analysis, all portaging was done on bedrock in the river. The USFS has no basis for claiming any new trails will be needed for portage.
- **User-Created Trails:** The USFS lists 19.3 miles of *existing* user-created trails in the table that is supposed to predict trails that occur as a result of *future* boating. These trails were created by anglers and hikers, and are irrelevant to the issue of paddlers floating downstream in the future.

Regardless of these wildly inflated and illogical estimates of trail needs, the USFS finds that:

...the total length of these trails or the amount of ground disturbance associated with these activities (boating) would be small compared to the total miles of existing trails and roads in the upper Chattooga watershed EA p. 45.

And

Boating would result in additional ground disturbance but there would be an overall net reduction in sediment when watershed improvement projects are implemented. EA p. 46.

And

Although existing user-created trails, dispersed campsites and parking areas, along with chronic erosion points, are ongoing sources of soil impacts, they are minor when compared with chief contributors to erosion and sediment input such as roads and road maintenance. Similarly, impacts from introducing boating also would be minor. EA p. 47.

And

...new user-created trails solely associated with boating are expected to be minimal.... EA p. 122.

Allowing unlimited boating to occur in the Upper Chattooga River and its tributaries would result in little or no additional trails, access areas, or soil disturbance. The USFS offers no evidence that any significant impacts are likely to occur in association with boating, especially in the context of vastly larger and faster growing land-based forms of recreation.

D. The EA and the 2009 Forest Supervisors' Decisions do not contain sufficient biophysical information to directly limit boating.

Even if the USFS could prove that paddling on the Upper Chattooga River has unique and significant impacts, it has no basis for banning floating. All recreational uses have some footprint on the landscape. Campers need campsites and leave behind human waste, hikers need trails and create new ones, anglers need river access and kill fish, hunters disturb and kill animals, and the list goes on. In the multiple use context of USFS management, these impacts are accepted, and when necessary controlled through technical fixes. The USFS is accepting impacts for some Wilderness compliant groups and avoiding other supposed impacts by denying access to other Wilderness compliant groups. As noted above, banning a use is the harshest possible management action, and one that should only be undertaken after other remedies have been exhausted. Regarding paddling, no impacts have even occurred, let alone required management.

E. The USFS proposes measures to minimize or mitigate potential impacts of paddling for all alternatives.

The USFS opines about potential biophysical impacts associated with allowing unlimited paddling to occur, it proposes mitigation measures that render these unlikely impacts moot. The USFS proposes to monitor woody debris and rare plants, and to create any trails needed at USFS standards. Even if these unfounded opinions that some impacts may occur with paddling are accepted, the USFS acknowledges that these impacts can be minimized and mitigated through common land and river management practices.

II. The Stated Social Justifications for the Boating Ban Are Not Persuasive and Are Not Based On Adequate Information

A. The USFS chose to collect inadequate data.

The USFS took four years to collect user data on which to make a decision. However, as part of the data collection, only one group of 8-10 people was allowed to paddle part of the river over a two day period. All other users were allowed in unlimited numbers throughout the four year period. The USFS did not conduct surveys, require permits, conduct robust user counts, study user conflicts, or collect encounter data. In this four year period the USFS did not witness a single social impact from paddling on the Chattooga or elsewhere in the region, nor did it collect data for the social impacts of other uses. The agency missed an opportunity to conduct a meaningful user capacity analysis.

B. The analysis was biased against paddling in a manner that exaggerates potential social impacts of paddling.

(1) The USFS admits bias by managing for a single artificial use.

The USFS is clear: They are banning nature-based paddling opportunities to benefit an elite community of anglers that pursue stocked exotic trout. The USFS states that:

The 21-mile stretch above the Highway 28 bridge, known as the upper Chattooga, is highly valued for the unique fishing experience, the solitude and scenery, as well as the quality of the trout fishery. *Heavy stocking* and the institution of a delayed-harvest section in the Nicholson Fields reach have recently made the fishing experience even more attractive (Samsel 2007). There is a need to protect the unique angling experience above highway 28. EA p. 2.

Allowing whitewater boating on some or the entire upper Chattooga River has the potential to...affect the high-quality backcountry angling experience. EA p. 3.

Angler/boater on-river encounters are among the most important impacts associated with allowing boating use on the upper Chattooga River. EA p. 135.

Not only has the USFS selected an alternative that virtually guarantees anglers exclusive use of the Upper Chattooga River, the USFS selected an alternative that bans paddling on many days that anglers are not even fishing. The USFS made this choice because the mere *thought* of a paddler on the river would impact the elite anglers. Under the alternative chosen by the forest supervisors:

Boating is only allowed when it is very likely that boaters will not encounter any other river users (especially anglers on river, where existing encounter levels are very low and where asymmetric impacts are most likely) to preserve the unique year-round backcountry angling opportunities, an important component of which is on-river solitude.

Because of the limitations on boating (flow, zoning and season) in this alternative, boaters are expected to be a small contributor to on trail and on-river encounters thereby preserving the unique year-round backcountry angling opportunities on the upper Chattooga, a critical ingredient of which is on-river solitude. EA p. 135.

The USFS has arbitrarily and capriciously elected to appease one small intolerant user group. The USFS and their partners in the state agencies stock damaging exotic fish to attract the anglers, which creates an expectation among the anglers that the river is theirs alone, and the agencies exclude another user group to meet the demands of the anglers. There is no basis for managing a Wild and Scenic River to maximize one use and eliminate another.

Regarding angling, the Chattooga is managed more like an industrial trout farm and a grocery store than a Wild and Scenic River. Roughly 70,000 exotic fish are stocked annually, but without this artificial enhancement the river would just be a good stream to fish. At present, it is attractive largely because of the stocking program. However, anglers do not rate the Upper Chattooga highly among local substitutes, a glaring omission from the EA's glowing review of the angling resource. Studies have shown for example that:

The low number of substitutes and the high levels of attachment among the whitewater boaters suggest that the Chattooga represents a fairly unique resource within the greater regional system. Alternatively, among the TU member the Chattooga is an option among an array of alternatives, some of which provide a better angling experience than the Chattooga experience. These findings may indicate that the Chattooga fills a niche for the whitewater boaters not found elsewhere in the region (i.e. a Wild & Scenic River relatively close to large population centers). Whereas for the TU members, the Chattooga may be a good place to fish near home, but not an optimal experience.¹⁵

Thus the only empirical evidence relating to the importance of the upper Chattooga as an angling resource strongly disagrees with the EA's premise, conclusions, and preferred alternative. The EA lacks a suitable description of the Upper Chattooga River as a boating resource. The reaches that the USFS allowed to be paddled during the one-time, two day assessment were rated very high by paddlers, and paddlers appreciate all the same scenery and solitude opportunities that anglers do. Perhaps the main difference is that the experience of boaters is of a natural river, whereas artificially stocked fish are critical to angler's experiences. The USFS has no basis to claim that the Upper Chattooga provides an angling experience that is any more unique, powerful, or important than the paddling experience it provides. To make such a claim is inequitable and unsupported.

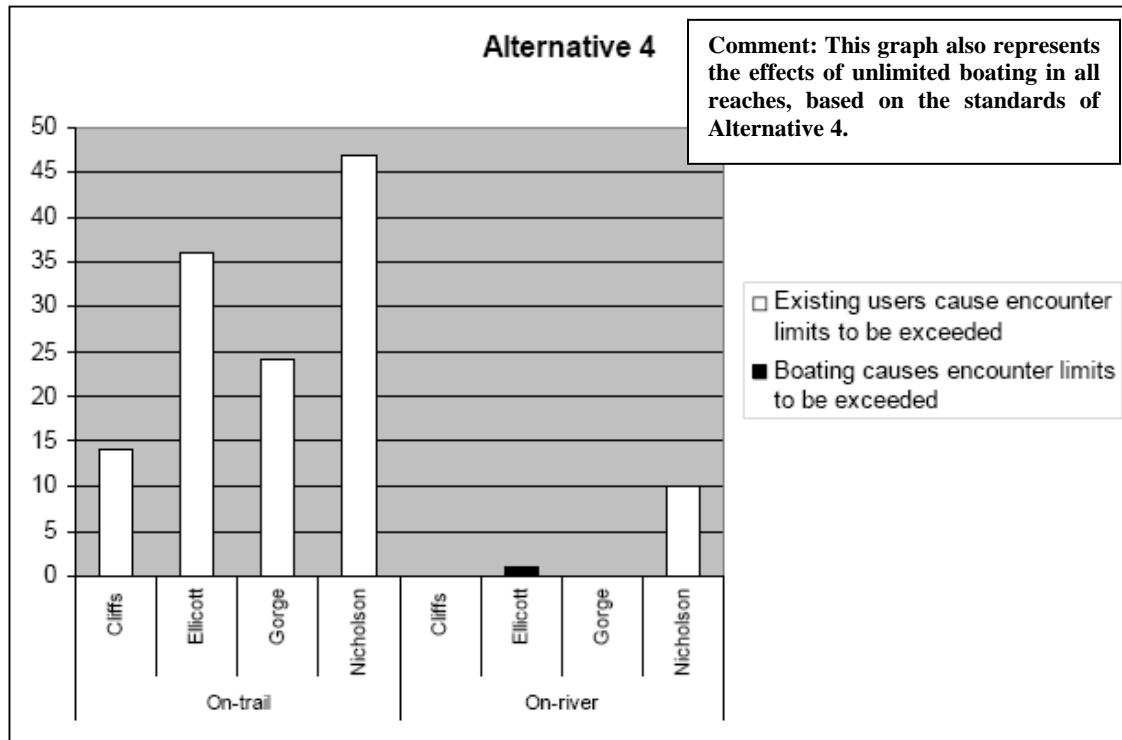
¹⁵ Backlund, Erik A. in Peden, John G.; Schuster, Rudy M., comps., eds. Proceedings of the 2005 Northeastern Recreation Research Symposium; 2005 April 10-12; Bolton Landing, NY. Gen. Tech. Rep. NE-341. Newtown Square, PA: U.S. Forest Service, Northeastern Research Station (COLBURN Ex. 16.)

(2) **The USFS alternatives exaggerate potential social paddling impacts, and hide the fact that boating has no encounter impacts.**

The USFS analyzed three different sets of encounter standards: a tight standard in Alternative 2, a loose standard for Alternatives 3-5 (which harshly limit boating), and an intermediate standard for Alternatives 8-10. Applying different standards to different management alternatives makes a comparison of management alternatives in their analysis impossible. More to the point, the application of tight standards to Alternative 8 which allows the most boating, and loose standards to those alternatives that restrict boating, makes Alternative 8 artificially appear higher impact than other alternatives. This intentional bias of the analysis makes a fair comparison between Alternative 8 and the selected Alternative 4 impossible – unless Appendix D is used to calculate the number of days on which encounter standards would be violated in concert with unlimited boating occurring on all reaches using the standards of Alternative 4 and eliminating the non-existent “scenic boating” group. American Whitewater conducted this analysis.

For perspective, the USFS analysis of encounters Alternative 4 is best depicted in Figure 3.3-2, copied below with comment added.

Figure 3.3-2. Estimated Number Of Days Per Year On-Trail And On-River Encounters From Existing Users And Boaters Are Likely To Exceed Encounter Limits By Reach For Alternative 4.



When the same calculations that were used to generate this graph (i.e. encounter standards from Alternative 4) are run on unlimited boating on all reaches, the graph does not change at all. When the same standards are applied to all management alternatives demonstrates that **allowing**

unlimited boating does not create one additional day of encounter limits to be exceeded. Thus, the seasonal, reach, and flow restrictions that the USFS claims are needed to minimize the violation of their standards *have no effect* on encounter standard violations.

The USFS has constructed the alternatives to mask the real effect of unlimited floating on encounter data: *none*.

The USFS has failed to directly compare an unlimited boating alternative with its biased preferred alternative. Instead, the agency analyzed the closest alternative to an unlimited boating alternative (Alternative 8) with severely restricted standards and added a non-existent user group into the analysis. The results of these strategic manipulations of the analysis are evidence in Figure 3.3-4 below.

Figure 3.3-4 Estimated Number Of Days Per Year On-Trail And On-River Encounters From Existing Users And Boaters Are Likely To Exceed Encounter Limits By Reach For Alternative 8.

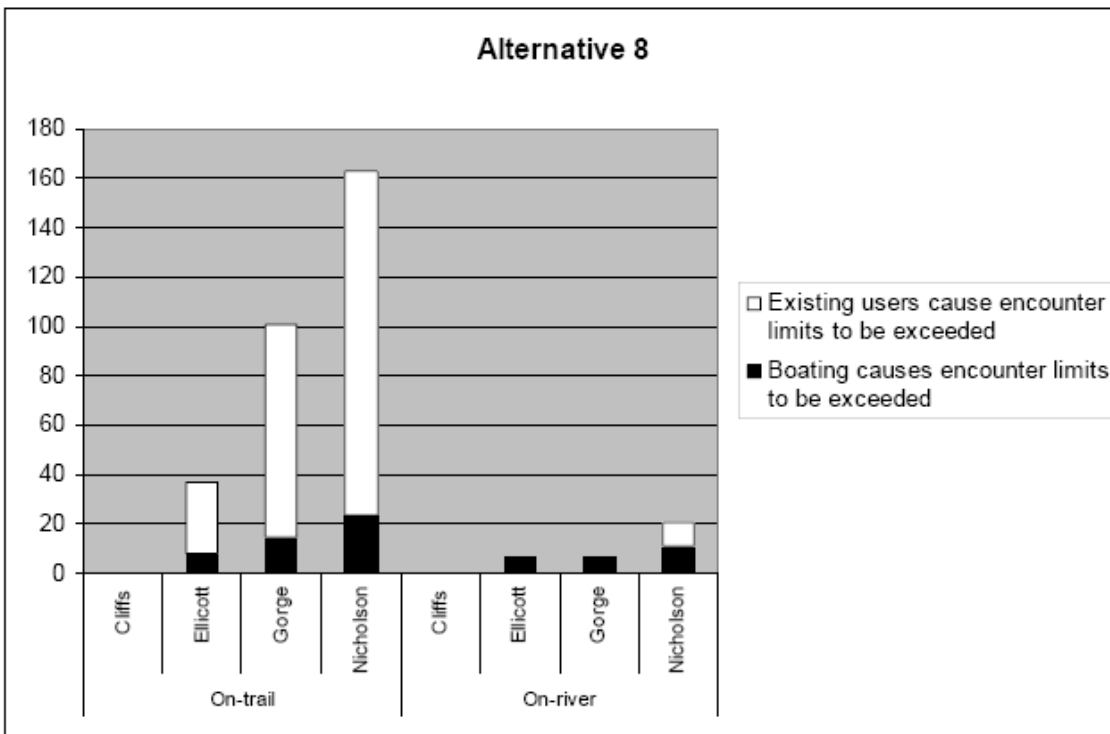


Figure 3.3-4, viewed in combination with figure 3.3-2 shows that the encounter standard violation increases exhibited by Alternative 8 are **totally the result of tighter standards and the addition of a nonexistent group – not expanded boating access**. The USFS failed to conduct a fair analysis of a far set of alternatives. Instead, the agency masked the fact that allowing unlimited boating would have no impact whatsoever on encounter standard violations. This is an unconscionable breach of ethics and/or scientific practice, and a clear example of the bias that permeates the USFS analysis.

(3) **The EA, by focusing on boating as the only management variable, does not consider a full range of alternatives and introduces inherent inequity.**

The USFS alternatives were designed with an inherent bias against paddling. Indeed, direct limits to paddling, and standard management actions common to all alternatives are the only actions proposed by the USFS.

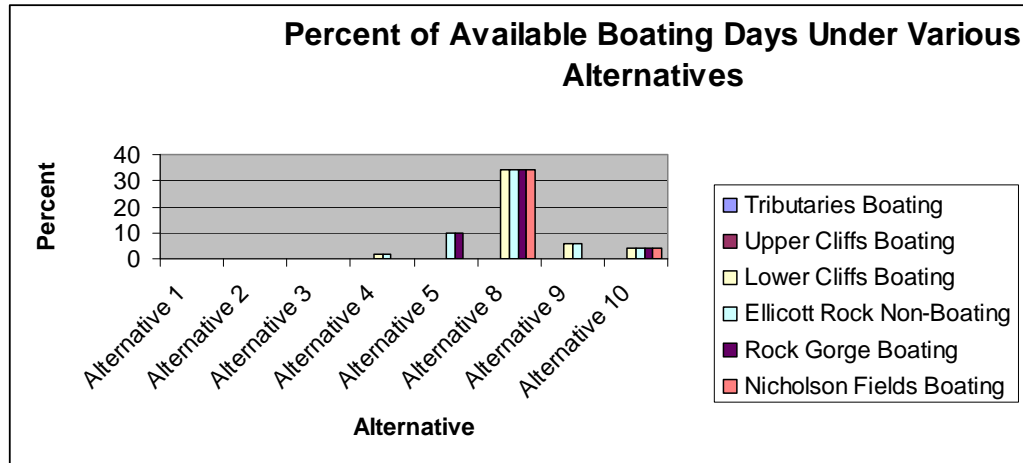
The USFS proposes to limit all existing uses as a single group, in its primary action alternatives, but only after encounter standards for those groups are violated on 20% of days. Limits would first be imposed through indirect measures, and only if and when those indirect measures fail would the USFS impose direct limits. This is appropriate. The USFS proposes three sets of encounter standards: 1) a tight standard in Alternative 2, 2) current encounter levels in Alternatives 3-5, and 3) intermediate standards in Alternatives 5-8. The USFS adopts the loosest standard – current use - allowing the most people to visit before actions are required. While the agency proposes a range of standards for encounters for existing uses across alternatives, it fails to compare any actions that would directly limit the amount of hiking, angling, swimming or other non-paddling uses. To put it another way, the amount, location, season and flow level associated with non-boating uses were not used as variables in this analysis.

The USFS also includes a host of standard resource management actions that only have two variations across alternatives: the highly protective Alternative 2, and the less protective Alternative 3. These analyses are unnecessary because the measures are simply designed to bring the corridor up to normal standards for trails, camping, and erosion. The USFS does not consider banning or limiting existing uses based on their biophysical impacts.

The alternatives treat paddling very differently than other uses. All alternatives ban paddling on the uppermost section of the Wild and Scenic upper Chattooga River and its tributaries without analysis. Alternatives 1-3 ban paddling on the entire upper Chattooga, all the time, at all flows. Four of the remaining five alternatives impose harsh limits on paddling using flow, season, and reach limitations. Only Alternative 8 treats paddlers like the USFS treats all other uses in all alternatives, with the noteworthy exception of the geographical bans in Alternative 8. In the USFS analysis, paddling was the only active variable, and was treated inequitably.

(4) **The EA, by considering a skewed range of boating alternatives, does not consider a full range of alternatives and introduces inherent inequity.**

As seen in the graph below, all of the boating alternatives except Alternative 8 provide either zero or very small amounts of boating on any given reach. American Whitewater addressed this inequity in its Scoping Comments (COLBURN Ex. 17.), which the USFS failed to address. All alternatives propose zero use on one reach and the tributaries, three alternatives propose zero boating on all reaches, and all but two alternatives propose zero use on additional reaches. Other than Alternative 8, all alternatives consider allowing boating on only 0-10 percent of days.



Essentially, the USFS considered Alternative 8 as a throwaway, and only gave serious consideration to extremely small amounts of paddling. By limiting analysis in such a skewed manner, the USFS has biased the EA and violated NEPA.

(5) The USFS attributes encounters caused by a user group that does not exist (scenic floaters) to paddlers.

The USFS created a user group in their analysis that does not exist, which inflates the estimated encounters associated with allowing unlimited paddling to occur. To our knowledge, this user group, “scenic boaters,” was not represented by a single letter, comment, or meeting attendee. They simply do not exist. Not only does the USFS create the user group, but they also create specific use numbers and encounter estimates for them. The EA states that:

Additionally, [Alternative 8] is the only alternative in which scenic boating is anticipated on the main stem upper Chattooga. Whittaker and Shelby (2007) estimate this activity would likely occur on 50 days or less per year in the Nicholson Fields reach, and on ten days or less per year in portions of Ellicott Rock and Rock Gorge reaches. This translates into 75 boatable days in an average year for the Chattooga Cliffs reach ($3 + 34 + 77/2$), 85 for the middle two reaches ($3 + 34 + 77/2 + 10$ scenic boaters), and 125 ($3 + 34 + 77/2 + 50$ scenic boaters) for Nicholson Fields. Using data from the last 67 years the number of boatable days would range from 85 to 168 in Nicholson Fields (Hansen 2007), and less in the other three reaches... EA p. 142.

The USFS applies the encounters caused by this nonexistent group only to Alternative 8, the alternative that most closely represents unlimited paddling. The artificial data skews the analysis by inflating the impacts of allowing paddling.

Furthermore, the USFS fails to consider the simple option of not allowing river access at the top of Nicholson Fields and thus requiring paddlers to float the entire challenging Rock Gorge reach if they wish to float through Nicholson Fields. Indeed, this is what virtually all whitewater

paddlers would prefer regardless. No user group has ever requested river access at the top of the Nicholson Fields reach. The USFS abused its discretion when it created a user group, created a problem, and arbitrarily and capriciously limit paddling based on imaginary impacts.

(6) **The EA and Forest Supervisors' Decisions overlook massive social impacts of other uses that make any paddling impacts pale in comparison**

(a) **Stocking of fish and associated angling have significant widely recognized impacts**

(i) Increased use and encounter standards violations

The USFS widely accepts that stocking and intensive management for angling has led to violation of encounter standards and significantly increased use. They acknowledge for example that:

Heavy stocking and the institution of a delayed-harvest section in the Nicholson Fields reach have recently made the fishing experience even more attractive.

Angling trends on the Chattooga also depend on stocking and regulation stability. Major changes in current stocking levels or regulation changes that favor one type of fishing over another would probably affect future use. EA p. 117.

...in the highest encounter segment (Nicholson Fields), current on-trail encounters exceed limits about 47 days (13%) of the year.

Currently, fishing competition is probably an issue at the front country fisheries at Burrells Ford and Highway 28 during stocking season and for the Nicholson Fields reach during delayed-harvest season. EA p. 123.

The USFS fails to analyze alternatives that limit angling either directly or through limits to stocking.

(ii) Helicopter flyovers

The USFS acknowledges on page 114 of its EA that the Rock Gorge section of the Upper Chattooga River, which flows through an inventoried Roadless Area, is stocked via helicopter in the fall. The USFS fails to consider the impacts of low elevation helicopter flights on backcountry visitors.

What is less clear is whether or not the USFS endorses helicopter stocking in the Ellicott Rock Wilderness Area. In a 2004 cost-share agreement between the USFS and Trout Unlimited, it is stated:

The purpose of this agreement is to work cooperatively to stock areas of the West Fork Chattooga and the Chattooga River with brown and rainbow trout. The areas are designated as Wilderness and must be stocked by helicopter due to lack of access by motorized vehicles.

Low elevation flights in Wilderness Areas are widely recognized as damaging to the Wilderness experience of visitors.

Helicopters and airplanes are the most common means for planting fish in wilderness lakes. Even if they do not land, they violate the spirit of the Wilderness Act and its prohibition against motorized vehicles and any form of mechanical transport. Aerial stocking also significantly degrades the primitive recreation experience by disrupting the solitude and quiet that most wilderness visitors seek. Wilderness experiences may also be compromised by the increase in the number of anglers that will be attracted to stocked lakes. Finally, the introduction of fish as a top predator significantly alters natural selection pressures within the aquatic ecosystem, potentially leading to different evolutionary trajectories and severely compromising a fundamental aspect of wildness.¹⁶

(iii) Intolerant users push out nature based visitors

Perhaps the biggest social impact of the massive angling program on the Upper Chattooga is that it has resulted in the total exclusion of paddlers from the river for well over 30 years. The intense stocking and historic boating bans have created an apparently crowded and absolutely intolerant user group that advocates for exclusive rights to enjoy the river. While encounters would be shared between boaters and anglers, albeit rarely, the USFS proposes limits only on paddlers.

C. There are no user conflicts on the Chattooga River in need of management.

The decision to ban paddling to prevent user conflicts that are not occurring, have never occurred, occur nowhere else, and are not likely to occur is arbitrary and capricious. While the USFS may have the authority to zone uses, it must have justification for doing so and have exhausted other opportunities first (see the ROD for American Whitewater's Forest Plan appeal).¹⁷ In the EA, the USFS offers neither justification, nor evidence that other management techniques have been attempted – let alone exhausted. The USFS assertion that it must ban paddling to prevent conflicts is arbitrary, capricious and unfounded.

¹⁶ Peter Landres, Shannon Meyer and Sue Matthews, *The Wilderness Act and Fish Stocking: An Overview of Legislation, Judicial Interpretation, and Agency Implementation*, Ecosystems 2001, vol. 4 at 289. (COLBURN Ex. 18.)

¹⁷See section IV.B.5 of American Whitewater's 2004 appeal of the RLRMP for additional discussion of why zoning is not justified on the Upper Chattooga. (KINSER Ex. 6.)

(1) History Shows No User Conflict on the upper Chattooga

There is no reliable evidence in the USFS record that a conflict between boaters and anglers ever occurred on the upper Chattooga River. The evidence of conflicts is anecdotal and generally provided by sources that are interested in maintaining the existing ban on floating. This evidence is also scant, refers only to the lower river, and appears to refer to only one or two instances. Thus the USFS is managing for an impact that has never existed.

(2) Precedent Shows No User Conflicts Anywhere in the Region

There are no conflicts to minimize between boaters and anglers on the Chattooga or anywhere in the region. Boating and angling co-occur on 213 river reaches in North Carolina, 142 in Georgia, and 80 in South Carolina. None of these 435 rivers has a limit on the number of private boaters allowed to float the river. None of these rivers has a documented conflict between anglers and boaters. The USFS takes an enormous leap of judgment to assume that unique conflicts will develop between anglers and boaters on the upper Chattooga. This defies overwhelming precedent. The USFS asks the public to accept that these conflicts will be so severe that one use must be totally eliminated. This is an extreme and unreasonable response to a non-existent problem.

(3) Boating will not impact the solitude provided by the upper Chattooga River.

The EA uses the word solitude 129 times but fails to properly apply the term in a recreational context. The EA infers that boating has some relationship to the solitude of the area, but inexplicably ignores that relationship by stating that all of their alternatives protect solitude. The EA states:

Information from the public indicates that solitude is one of the most valued, if not *the* most valued quality of the recreation experience in the upper Chattooga corridor. Solitude is also one component of the Chattooga River's recreation ORV and also part of the "outstanding opportunities for solitude" goal in the Wilderness Act.

The USFS has responded to this by constructing alternatives that they feel all protect solitude:

Action alternatives in this analysis ... all maintain outstanding opportunities for solitude in the Ellicott Rock Wilderness (Wilderness Act) and the upper Chattooga as a whole, and protect and enhance high quality recreation experiences (including opportunities to experience outstanding natural environments, challenge, solitude, etc.) that are part of the recreation ORV (Wild and Scenic Rivers Act). EA p. 120.

Yet elsewhere in the document they claim that their goal of limiting paddling is:

[T]o preserve the unique year-round backcountry angling opportunities, an important component of which is on-river solitude. EA p. 134.

According to the USFS, even Alternative 8 preserves solitude, thus it is unclear why boating must be banned to preserve solitude for anglers. The EA refers to “dictionary.com” for their definition of solitude:

Solitude refers to 1) the state of being or living alone; seclusion; 2) remoteness from habitations, as of a place; absence of human activity; and 3) a lonely, unfrequented place (*Dictionary.com Unabridged (v 1.1)*). EA p. 120.

This is an over-simplistic definition of solitude and one that departs from established backcountry methodology. Backcountry management research and methodology demonstrate the flawed oversimplification of the USFS discussion of solitude. For example, Patterson and Hammitt conclude that encounters between recreationists have a minimal impact, if any, on the solitude experienced by those recreationists.¹⁸ Their conclusion is based on the fact that “solitude has a broader meaning than simply visitor encounters and perceived crowding.”¹⁹

Their research concludes that “solitude refers to remoteness, primitiveness, nonconfinement, cognitive freedom, and autonomy. In fact, many of these other aspects of solitude appear to be more important than being alone.”²⁰ Thus, contrary to the over-simplified definition used by the USFS, encounters do not represent the whole of solitude experience for wilderness users.

When analyzed under established backcountry management methodology, it is clear that paddling will have minimal, if any, impacts on solitude. It will not affect any of the above-referenced characteristics of solitude. To the contrary, restoring paddling access allows additional people (paddlers) to experience “remoteness, primitiveness, nonconfinement, cognitive freedom, and autonomy.” Thus, the ban on paddling actually decreases the overall solitude experience on the Headwaters because it eliminates the nonconfinement, cognitive freedom, and autonomy of a group of primitive backcountry users.

Even if the oversimplified analysis of solitude is accepted, it is still unpersuasive. If encounters reduce solitude, then all interactions between individuals in a backcountry setting reduce the solitude for all others, regardless of the nature of that interaction. Whether it is two anglers

¹⁸Patterson, M.E., and Hammitt, W.E. (1990). *Backcountry Encounter Norms, Actual Reported Encounters, and Their Relationship to Wilderness Solitude*. Journal of Leisure Research. Vol. 22. No. 3. 259-275.

¹⁹ Hammitt, W.E. (1983). *Toward and Ecological Approach to perceived crowding in outdoor recreation*. Leisure Sciences. 5. 309-320. “Solitude need not be the opposite of social crowding.”

²⁰Hammitt, W.E. (1983). *Toward and Ecological Approach to perceived crowding in outdoor recreation*. Leisure Sciences. 5. 309-320; Hammitt, W.E. (1982). *Cognitive Dimensions of Wilderness Solitude*. *Environment and Behavior*. 14. 478-493; Hammitt, W.E., Brown, G.F. (1984). *Functions of privacy in wilderness environments*. Leisure Sciences. 6. 151-165.

interacting, an angler and a hiker, or an angler and a paddler, the impacts on solitude are identical. Thus the EA solitude analysis, at most, suggests that backcountry interactions should be reduced in general. If this is the case, then all uses should be equitably limited rather than one type of use being completely banned. There is nothing inherent in the general conclusion that interactions should be reduced that suggests a certain *type* of use (boating) should be banned.

Under the USFS approach, the appropriate inquiry should be: “how can we best reduce interactions between users on the upper Chattooga to keep encounters within an acceptable range?” Banning whitewater boating is the *least* effective way to reduce user interactions on the upper Chattooga.

Experiencing solitude is a privilege to which all backcountry enthusiasts should have equal access. Thus, if a land manager decides that use must be limited to encourage solitude, the most responsible and ethical way to limit use is to limit all users equitably. A paddler has the same appreciation, desire, and rights regarding access to solitude experiences as anglers, hikers, and other forest users. It is unfair and discriminatory to ban paddlers from the Chattooga Headwaters while allowing all other users to access the area in unlimited numbers.

Indeed the highest office of the USFS agreed with American Whitewater based on their 2004 appeal of the Sumter National Forest Plan. The ROD of the appeal stated:

While there are multiple references in the record to resource impacts and decreasing solitude, these concerns apply to all users and do not provide the basis for excluding boaters without any limits on other users.

Paddlers deserve equal access to experience the solitude of our Nation’s most pristine wilderness areas and wild and scenic rivers. If the USFS must limit use on the Chattooga Headwaters to protect solitude, then it should be equitably limited for all users to the extent compatible with Wilderness and WSR designations.

(4) Boating and Angling are Complimentary River Uses.

The USFS implies that conflict will occur between anglers and paddlers if access is restored to paddlers. This conclusion is not supported by any study or in practice. Anglers and paddlers have common goals in promoting river conservation and access and have participated in countless successful collaborations that promote sharing resources with minimal conflict. Studies show that anglers and paddlers tend to use rivers at different water levels, including the EA on this issue. Therefore contact is self-limiting between these user groups. The ban on paddling is an artificial and unnecessary separation of two compatible user groups. Contact between paddlers and anglers is infrequent, but when it occurs it is complimentary.

Solitude, scenery, small group definition, and sense of place are important to every specialized

group.²¹ This is true for both paddlers and anglers.

Both anglers and paddlers should be seen as groups with strong commitments to environmental stewardship, strong connection to place, and high appreciation of wilderness and solitude. In essence, these two groups should be viewed similarly.

A review of studies in recreation specialization reveals that both boating and angling take place in the context of limited resources. Both user groups must contend with environmental degradation, and the intensification of legal concerns regarding use of private lands.²² Analysis and resolution of these issues is often the same for whitewater paddling and coldwater angling. For these reasons, the two groups commonly collaborate to preserve their joint goals and complimentary uses.

Recreation specialization is characterized by a range of elements related to individual attributes of participation and setting preferences. Recreation specialization research examines widely ranging topics including, locus of control,²³ privacy orientation,²⁴ specialization, experience, social group structure,²⁵ recreation setting preferences, natural setting preferences, equipment,²⁶ risk,²⁷ and safety.²⁸

²¹Ewert, Alan., Hollenhorst, S. 1994. *Individual and Setting Attributes of the Adventure Recreation Experience*. Leisure Sciences 16: 177-191.

²²Lee, R.D. *Recreational Use Statutes and Private Property in the 1990's*. 1995; *Journal of Park and Recreation Administration*. 13: 71-83

²³Knopf, R.C., Peterson, G.L., Leatherberry, E.C. 1983. *Motives for Recreational Floating: Relative Consistency Across Settings*. Leisure Sciences. 5: 231-255.

²⁴Knopf, R.C. 1987. *Human Behavior, Cognition and Affect in the Natural Environment*. In *Handbook of Environmental Psychology*. Stokols, D. and Altman, I. New York: Wiley, McIntyre, N, 1989, *The Personal Meaning of Participation: Enduring Environment*. *Journal of Leisure Research*. 21: 167-179.

²⁵Roggenbuck, E.J., Williams, D.R., Bange, S.P., et al. 1991. *River Float Trip Encounter Norms: Questioning the Use of the Social Norms Concept*. *Journal of Leisure Research*. 23: 133-153. Schuett, M.A. 1995. *Predictors of Social Group Participation in Whitewater Kayaking*. *Journal of Park and Recreation Administration*. 13: 42-54.

²⁶Block, P.H., Black, W.C., Lichtenstein, D. 1989. *Involvement with the Equipment Component of Sport: Links to Recreational Commitment*. Leisure Sciences. 11: 187-200.

²⁷Slovic, P. 1964. *Perception of Risk*. *Psychological Bulletin*. 61: 220-223. Slovic, P. 1987. *Perception of Risk*. *Science*. 236: 280-285.

²⁸Mackay, S. 1988. *Risk Recreation in Wilderness Areas: Problems and Alternatives*. *Western Wildlands*. 33-38. McEwan, D.N. 1983. *Being High on Public Land: Rock Climbing and Liability*. *Parks and Recreation*. 18: 4650.

Land managers have implemented various programs to address these issues, including: 1) interpretive programs,²⁹ 2) educational material,³⁰ 3) user fees,³¹ 4) permit systems,³² and 5) establishing limited access areas.³³ Effectively implementing the programs above requires quality information about user groups. Recreation specialization research does not support exclusion of boating or angling because they are complimentary uses with complimentary goals. The USFS fails to implement established management tools, and instead adopts an unprecedented ban.

Kinney maintains that the complexity of inter-group relationships is increasing in outdoor recreation settings.³⁴ There is not always consensus on how land should be managed, or in some cases not managed. The challenge before land managers is to accommodate a wide spectrum of values, beliefs, and economic interests to form directed and sustainable management plans. The USFS's near absolute ban on paddling does not rise to this challenge.

The USFS concludes that since certain users expect there to be no paddlers on the upper Chattooga, and that those users will be disturbed by the presence of paddlers in some undefined way. Several studies contradict this assumption. These studies show that an individual's cognitive belief that a particular backcountry situation is a problem may not correspond with that individual's experience.³⁵ In other words, while some users may expect the presence of paddlers

²⁹Burzynski, R. 1991. *Promoting Land Ethics: A Challenge for Interpretation*. Trends. 28: 31-34.

³⁰Hollenhorst, S., Schuett, M.A., Olson, D, et al. 1995. *An Examination of the Characteristics, Preferences and Attitudes of Mountain Bike Users of National Forests*. Journal of Park and Recreation Administration. 13: 41-51.

³¹Wisman, S.A., 1992. *The Satisfaction and Willingness to Pay of Whitewater Recreationists*. Ph. D., West Virginia University.

³²Bates, S.F. 1992. *Whitewater Dilemma: Allocating Boating Permits on Limited-Entry Rivers*. Rivers. 3: 266-275. Baxter, W. 1991. *Permits on the Smith? Evolution of Use on a Montana River*. Western Wildlands. 16:38.

³³Bonnicksen, T.M. 1991. *Managing Biological Systems*. Journal of Forestry. 89: 10-15. Driver, B.L. 1985. *Specifying What is Produced by Management of Wildlife by Public Agencies*. Leisure Sciences. 7: 281-295.

³⁴Kinney, T.K. 1997. *Class V Whitewater Paddlers in American Culture: Linking Anthropology, Recreation Specialization, and Tourism to Examine Play*. Unpublished Graduate Thesis. Northern Arizona University.

³⁵Patterson, M.E., and Hammitt, W.E. (1990). *Backcountry Encounter Norms, Actual Reported Encounters, and Their Relationship to Wilderness Solitude*. Journal of Leisure Research. Vol. 22. No. 3. 259-275.

Ditton, R.B., Fedler, A.J., and Graefe, A.R. (1983). *Factors Contributing to Perceptions of Recreational Crowding*. Leisure Sciences. Vol. 5, No. 4. 273-288.

Hendricks, W.W. (1995). *A Resurgence in Recreation Conflict Research: Introduction to the Special Issue*. Leisure Sciences. 17. 157-158.

to impact their experience, those impacts may not actually occur.

While the USFS states they are banning boating to “preserve the unique year round backcountry angling opportunities, EA p. 134,” the agency fails to offer any evidence that allowing paddling would lead to the loss of those angling opportunities.

In reality, boating and angling are complimentary uses because flows largely separate the recreational uses. Boaters prefer to float the deepest and swiftest channels of water, while anglers prefer to cast from the bank or from a place in the streambed where the current is not overly forceful. Thus boaters and anglers are rarely in the same physical part of the river corridor. To accommodate the rare instances that paddlers and anglers desire to occupy the same physical spot on the river, these two user groups have developed a common sense and accommodating river ethic. In the rare instances that a paddler floats through an area where an angler desires to cast, the angler simply modifies his casting patterns to incorporate a seconds-long delay, allowing the boater to pass without inconvenience or difficulty. Similarly, in common river practice, boaters will alter their course to minimize any disturbance to an angler. While this river ethic is already widely practiced, minimal educational steps could be taken to reinforce it – for example by posting signs at put-ins and take-outs. Also evidencing the complimentary nature of boating and angling is the fact that many individuals enjoy both forms of primitive recreation, often at the same time. In short, boating and angling are inherently complimentary.

D. The EA and Forest Supervisors’ Decisions are not based on a complete or defensible use estimation system.

American Whitewater submitted comments on the failure of the USFS to conduct a valid user capacity study. (COLBURN Ex. 19.) Dr. Glen Haas has opined that in regard to user capacity analysis, the USFS is in violation of federal law, is contradicting its very own practices on other Wild and Scenic rivers, and is in violation of the principles and practices of the recreation resource planning profession.³⁶

Appendix D of the EA typifies the flawed statistics relied on by the USFS to address the upper Chattooga recreational issues. If standard margins of error were acknowledged for each set of data, the error would be enormous, likely exceeding the predicted encounters many times over. For example:

- USFS does not know how many hikers, anglers, campers, hunters, or other users visit the river corridor, where they visit, how long they stay, or the quality of their experience.

Owens, P.L. (1985). *Conflict as a social interaction process in environmental and behavior research: The example of leisure and recreation research*. Journal of Environmental Psychology. Vol. 5. 241-259.

³⁶ Declaration of Dr. Glenn E. Haas; See Complaint of American Whitewater, et al. October 14, 2009, U.S. District Court, District of South Carolina, Anderson Division

- USFS does not know how many paddlers will visit the river corridor.
- “Specific information about trail encounters has not been collected for most parts of the Chattooga River.” EA (Appendix D)
- Data about the relationship between use and encounters is not available. (EA Appendix D)

The USFS EA is clear:

Current information on the existing condition of backcountry encounters for all sections of the river was not available for this analysis. However, the results of the Use Estimation Workshop (Berger and CRC 2007) were used to estimate the average and peak use levels in the upper river corridor. In addition, averages from Rutlin (1995) and assumptions about existing rates and use encounter relationships were applied to the Use Estimation Workshop results to develop encounter estimates for existing users (see Appendix D). EA p. 120.

Despite a four year long user analysis that completely failed to address capacity, the USFS still lacks data indicating how many people are using the river corridor, what they are doing, or how often they encounter one another. In the place of real data, Appendix D offers a series of guesses which in turn are based on the Use Estimation Workshop and Shelby and Whittaker 2007. The Use Estimation Workshop was nothing more than a meeting of the same USFS and state fisheries department officials that are generally opposed to paddling, in which they guessed at use levels and encounters. Participants included:

Michelle Burnett, USFS
 John Cleeves, USFS
 Mike Crane, USFS
 Jeff Durniak, GAWRD
 Steve Hendricks, USFS
 Lee Keifer, GA WRD
 Karen Klosowski, Berger
 Jeff Owenby, USFS
 Dan Rankin, SCDNR
 Joe Robles, USFS
 Vern Shumway,
 Allen Smith, USFS
 Jot Splenda, Berger
 Doug Whittaker, CRC
 Joel Harrison, USFS

Shelby and Whittaker also could only guess at use numbers, because there is minimal data available. These guesses simply do not, by any standard, form an adequate basis for decision

making. The USFS has published specific methods for determining use, and the Sumter National Forest failed to utilize them. The USFS handbook Wilderness Recreation Use Estimation: A Handbook of Methods and Systems (COLBURN Ex. 20.) offers the following cautionary advice to managers:³⁷

With little or no reliable wilderness use information, managers cannot adequately judge resource condition trends. Visitor opinions alone are inadequate for evaluation purposes; there may be little agreement between visitor perceptions and the actual condition of the resource, or even on the conditions that determine “primitive and unconfined” experiences. Quality wilderness use information is absolutely essential for examining and testing the various tenets, principles, and dogmas of wilderness management; for optimal management of the resource, it is critical to distinguish management principles which have been empirically verified from those which have never been tested, and are based on nothing more than “authoritative opinions (Cole 1995).

Furthermore, the EA falls into the exact trap warned against by the authors of the USFS Technical Report on Wilderness user capacity. In the preparation of their analysis, the USFS has collected barely a shred of actual user data, and have instead relied upon the very type of “authoritative opinions” that Cole concludes are inadequate.

The USFS Technical Report lists five essential steps of any use estimation system. They stress that “If any of these elements is missing from the system, the exercise of data collection is of little or no value.” The five steps, and the Sumter National Forest’s treatment of these steps are outlined below.

1. *A Statement of Objectives:* We are not aware of a specific statement of objectives for the treatment of use estimation in the EA. However, the elements of the statement of objectives are generally found in Whittaker and Shelby 2007.
2. *Identification of the specific use characteristics to be measured.* No use characteristics were measured for the EA, except extremely limited presence data and some data on Wilderness condition. In addition to this minute amount of data collected, the USFS inappropriately relied upon existing use information (which was scant, old, and spatially limited), a problematic “use estimation workshop” and national or regional surveys of use trends (Shelby and Whittaker 2007). The EA failed to identify group size, length of stay, method of travel, use of commercial services, type of activity, temporal and spatial use distribution patterns, visitor perceptions, and visitor characteristics.

³⁷Watson, Alan E.; Cole, David N.; Turner, David L.; Reynolds, Penny S. 2000. Wilderness recreation use estimation: a handbook of methods and systems. Gen. Tech. Rep. RMRS-GTR-56. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 198 p. (page 2).

3. *Choice of appropriate wilderness visitor use measurement techniques.* The Technical Report offers the following measurement techniques: external visual observation, stationary internal observation, roaming internal observation, mechanical counters, registration, permits, surveys, indirect estimation³⁸, and aerial surveys. The only use measurement techniques actually employed by the Sumter National Forest were intermittent vehicle spot counts, which were extremely limited in temporal and spatial scope and wholly inadequate. No boating was allowed (except for one small group on one weekend) so no measurement of boating use could occur.

4. *Choice of the appropriate strategy for sampling.* There was no sampling strategy identified, except for occasional vehicle spot counts. The use estimations in the EA are largely based on the “use estimation workshop.” The Technical Report clarifies that such workshops are of little or no value and are inherently biased.

In reality, convenience or judgment samples are an extremely poor alternative to statistical sampling procedures. The use of human judgment invariably results in biased sample selection; judgment is unavoidably influenced by untested assumptions of how the various properties of the users or visit characteristics, or both, should be related. Furthermore, it is impossible to determine the size of the bias from sampling methods of this kind. *The samples obtained from judgment surveys are therefore not representative of the population as a whole.* Examples are wilderness users that are convenient or easy to survey, vocal supporters or critics of special interest groups at public meetings, users surveyed at easily accessed trailheads. The characteristics of the individuals sampled will invariably differ from those of users who travel into more remote or less-accessible areas, or who do not belong to a special-interest group. *Because standard errors cannot be calculated for such samples, statistical testing procedures and analyses cannot be used (Id. 44).*

It should be noted that the USFS attempts detailed statistical analysis of data generated by judgment sampling. The extremely small amount of real data was greatly massaged by SNF judgment and therefore there was no reliable strategy for sampling employed.

5. *Choice of a specific technique and/or procedure for data analysis and summary.* There were few data to analyze or summarize, and those that were analyzed were inappropriately generated through judgment sampling.

Based on these 5 steps, the technical report suggests 10 use estimation systems, none of which remotely resemble the approach taken by the SNF. In essence, the SNF hired consultants to conduct the first step of a use estimation system, statement of objectives, and stopped there.

³⁸While on its face the EA may seem to present “indirect estimation” of use, it does not. “Indirect estimation” is a technique that employs actual data on use-related variables that have known relationships to visitation numbers to estimate visitation. This extrapolation is rigorously tested for statistical and on-the-ground significance before relied upon for decision making. The EA makes no such efforts.

Instead of moving ahead with the other 4 steps as recommended by their own guidance documents, the SNF embarked on a process controlled by their own “authoritative opinions” and based on a near total absence of data. Because the EA fails to include a use estimation system that is consistent with USFS standards and protocols, the EA fails to provide a sound basis for estimating existing, past, or future use. Likewise, decisions made to limit paddling based on the EA’s estimates of use or encounters also lack a sound or defensible basis. As such, decisions to impose immediate and direct limits on use based on encounters are without merit, arbitrary and capricious.

(1) **Assumptions behind encounter estimates are not reasonable or defensible**

The EA is based on encounter estimates that are unsupported and illogical. The USFS “assumes that a hiker, angler, camper, etc. will see an average of 75% of all boaters floating a specific stretch on any particular day” EA p. 98). Roughly half the days on which flow triggers are reached would be un-boatable because of the timing of the flows, the unpredictability of the flows, or other conditions. In addition, the vast majority of the Upper Chattooga is not visible from any trail or campsite so non-boaters actually seeing paddlers would be minimal at best – not 75%. Boating and other uses typically occur during four hour windows, so overlap would be limited by roughly 1/3 of use even if occurring at the same time. Use estimates for boating and other uses is not based on hard data, and is thus unreliable for decision making. The assumption that 75% of visitors would see paddlers has no rational basis and thus is not a reasonable basis for decision making. The USFS’s reliance on these assumptions is arbitrary and capricious.

(2) **The EA concedes that managers created disagreements, and suggests that boaters alone should pay for it**

The EA makes the obvious finding that local USFS managers have created the current disagreements and hard feelings about how the Chattooga should be managed by instituting a policy that gave privileged access to one user group while removing another. These local managers essentially created a microcosm of prejudice. The EA provides:

For the last 30 years, some recreationists in the upper Chattooga corridor have come to expect a boat-free recreation experience and a place where they may be able to find a sense of solitude. In addition, the state natural resource agencies have pursued active fisheries management above Highway 28 by annually stocking the river with trout to enhance the angling experience. EA p. 113.

And

The conflict between existing users, as well as potential users, is tangible and may exist to a greater extent on the Chattooga than it does on other rivers. This is because non-boating groups have developed a “place attachment” to the area over the last 30 years that does not include boats. Conversely, boaters have developed an antipathy towards various existing users and land managers, the perception

being that they are unfairly excluded from the use of the upper river. Currently, goal interference, and the resulting face to face conflict between existing users and boaters, is mostly "perceived" as there is no on-the-ground mixing of these uses. Conversely, opportunities foregone for boaters, along with the associated conflict, are very real. EA p. 126-27.

While managers have created this inequity, the USFS now seeks to maintain it rather than clean up the mess. A US federal agency seeking to institutionalize unequal treatment is not acceptable.

E. Zoning Is Not The Answer

(1) Conflicts Methodology Instructs Against Boating Ban

A specific example of conflict is viewed by scientists as either interpersonal conflict or social values conflict. Interpersonal conflict can be defined as the presence of an individual or group interfering with the goals of another individual or group. Social value conflict can arise between groups who do not share the same norms³⁹ and/or values,⁴⁰ independent of the physical presence or contact between the groups.⁴¹ The authorities suggest that:

Understanding these sources of conflict (interpersonal conflict versus conflicts in social values) is important for natural resource managers because the solution to the conflict depends on the cause of the problem. Zoning, for example, may reduce conflicts stemming from interpersonal conflict because the user groups are physically separated. On the other hand, zoning is likely to be ineffective when conflicting values are involved (Ivy, *et al.*, 1992, Owens, 1985). Because social interaction is not necessary for this type of conflict to occur, physically separating users will have little influence. In these situations, education may be more effective.⁴²

The alleged conflict on the Headwaters is a social values conflict. For example, an angler representative made the following comment in support of keeping boaters out of the Headwaters: "Obviously they [boaters] just don't understand backcountry anglers...and our low tolerance for encounters with others with different beliefs." Researchers describe social values conflicts as follows:

³⁹Ruddell, E.J., Gramann, J.H. 1994. *Goal orientation, norms, and noise induced conflict among recreation area users*. Leisure Sciences. 16: 93-104.

⁴⁰Saremba, J., Gill, A. 1991. *Value conflicts in mountain park settings*. Annals of Tourism Research. 18: 155-172.

⁴¹Vaske, J.J., Donnely, M.P., Wittman, K., and Laidlaw, S. (1995). *Interpersonal Versus Social-Values Conflict*. Leisure Sciences, 17, 205-222.

⁴² Id.

if people do not observe an event, but believe a problem situation exists, the type of conflict must stem from a conflict in social values.

Obviously there has not been interpersonal conflict between boaters and anglers (or other users) on the Chattooga Headwaters because boaters are not allowed on the Chattooga Headwaters. Furthermore there are no studies documenting interpersonal conflicts between boaters and other dispersed recreationists on any of the hundreds of rivers in the region that anglers and paddlers share. Therefore, the alleged conflict must be based on the perception of a problem rather than on any actual event.

Specifically the conflict on the Chattooga is a social values conflict created by the Sumter National Forest, which gave one group exclusive access to the river while discriminatorily excluding another. This decision to favor one user group is not based on any scientific studies. Studies show that if an activity is stereotyped, it may result in intolerance, regardless of situational factors.⁴³ The USFS exacerbates intolerance and creates conflict where there would otherwise be none. In short, the USFS is not managing a conflict, they are creating, maintaining, and fueling one.⁴⁴

Significantly, authorities on conflict assert that “the potential for interpersonal conflict increases with increased visitation. On the other hand, for individuals who fundamentally disagree with an activity..., these conflicts in values should not vary with visitation.”⁴⁵ In other words, allowing boating on the Headwaters would not exacerbate the alleged social values conflict that may be present. Studies conclude that “when the source of conflict is differences in values, however, zoning is not likely to be very effective.” “In this situation educational efforts...may be more effective.”⁴⁶

The Southern Region of the USFS noted in a 2002 document (COLBURN Ex. 21.) that “conflict resolution may involve both zoning and education. When the source of conflict is goal interference, it is more appropriate to consider zoning by time, space, or activity.”⁴⁷ Goal interference is synonymous with interpersonal conflict. Thus, according to the Southern Region,

⁴³Ivy, M.I., Stewart, W.P., and Lue, C. (1992). *Exploring the Role of Tolerance in Recreational Conflict*. Journal of Leisure Research. 24. 348-360.

⁴⁴Significantly, Vaske, *et al.* assert that “the potential for interpersonal conflict increases with increased visitation. On the other hand, for individuals who fundamentally disagree with an activity..., these conflicts in values should not vary with visitation.”

⁴⁵Vaske, J.J., Donnelly, M.P., Wittman, K., and Laidlaw, S. (1995). *Interpersonal Versus Social-Values Conflict*. Leisure Sciences, 17, 205-222.

⁴⁶*Id.*

⁴⁷USDA Forest Service—Southern Research Station. (2002) The Southern Forest Resource Assessment: Section 4.5. Potential Conflicts Between Different Forms of Recreation.

while zoning may be an effective tool for managing interpersonal conflict, it is not recommended for managing social values conflict such as those on the Chattooga. The 2002 study further noted:

Zoning seems less effective when the conflict is attributable to differing social values, because such conflict does not necessarily require physical presence or actual contact between users.⁴⁸

The USFS banned paddling based on a misunderstanding or misapplication of its own policy on zoning as it relates to the literature on conflict.

Past decisions gave anglers a privilege they never should have had: exclusive access to a Wild and Scenic River. Now anglers consider that privilege a right worth protecting at the expense of other users. This inequality has created tension between groups who want to enjoy the Chattooga River, while these same groups share and collaborate on every other Southeastern river. Recreational specialization research shows that re-instituting a boating ban will do nothing to eliminate the perceived conflict on the Chattooga River, and will instead exacerbate conflict. This research also shows that education, not zoning, is the most efficacious means of reducing conflict.

(2) **Education as a Solution to Conflict**

Even if a conflict between boaters and other users did exist, education—not zoning—would be the best (and only) way to resolve that conflict.⁴⁹ Dyke and Rule found that people are less likely to experience anger if they are aware of the roots of the behavior that would have otherwise angered or frustrated them.⁵⁰ Likewise, Ramthun accordingly suggests that “interpretive efforts that help users to understand the behaviors, motivations, and land use needs of other user groups may reduce perceptions of conflict.”⁵¹ Examples of this type of education on the Chattooga would include educating anglers on paddlers’ river stewardship efforts, the compatibility of paddling use, concern with safety, and paddlers’ enjoyment of solitude. Ramthun also states that “while it is obviously necessary to establish some behavioral protocols, it may be equally necessary to promote understanding and acceptance for the needs and motives of different user groups. If these educational efforts emphasize that different user groups have many similarities, especially regarding relationship to setting, perhaps fewer biased evaluations

⁴⁸*Id.*

⁴⁹Vaske et al.’s recommendation that education be utilized to resolve social values conflict like those on the Chattooga is critical to the resolution of this issue and is well supported by other literature.

⁵⁰ Cited in Ramthun, R. 1995. *Factors in User Group Conflict Between Hikers and Mountain Bikers*. 159-169.

⁵¹Ramthun, R. 1995. *Factors in User Group Conflict Between Hikers and Mountain Bikers*. 159-169.

will occur.”⁵² The USFS has done the exact opposite by stating erroneously that paddlers have different goals and values than other uses, break laws, and that paddling is incompatible with angling. In so doing the USFS breeds intolerance and contempt for paddlers among anglers and other users where there could be tolerance, respect, and harmonious use.

Ramthun concludes his study as follows:

An emphasis on understanding and acceptance, if successful, would help to redefine the social situation in outdoor recreation settings. At present, other user groups are often viewed by recreationists as a source of interference and competition. *By emphasizing tolerance in our interpretive efforts, we may encourage the people in different user groups to see each other simply as fellow travelers in the outdoors.*”⁵³

This conclusion shows that education, not zoning, is the most appropriate means of resolving any alleged user conflicts. One of the most important educational tools available to the USFS to encourage tolerance is its publication of records of decision and the media coverage associated with those decisions. Sadly, the Sumter National Forest uses this educational medium to encourage discrimination rather than to encourage tolerance and collaboration.

F. The EA admits users will adapt to new norms

While the USFS asserts that allowing paddling would impact their favored use of angling, the agency also admits that the anglers would adjust to the new conditions. Even under Alternative 8 which allows the most boating of any alternative, the USFS finds that existing users will adapt:

Like Alternatives 4, 5, 9 and 10, this alternative will create a new “norm;” users with a “zero tolerance” for boating will either adjust or be displaced on 125 days in an average year. EA p, 146.

The USFS fails to estimate the number of users with a “zero tolerance,” but this group is likely very small. Also, the number-of-days analysis is false. Shelby and Whittaker (2007) were clear that there are an average of 247 days (68%) each year that are too low to paddle, 77 days (21%) of optimal angling and technical boating overlap, 34 days (9%) of optimal boating and low quality angling overlap, and 3 days of big water boating and low quality angling. This results in 114 days when boating and angling could co-occur based purely on hydrology – but Shelby and Whittaker also assert that *only half of these days would be usable by boaters*. Therefore, if paddling were permitted on the Upper Chattooga River, anglers would potentially share the river with paddlers on 57 days (16%) of days, and have the river to themselves on 308 days (84%).

⁵² Id.

⁵³ Id.

Expecting anglers to share the river on 16% of days is not unreasonable, and the USFS acknowledges that anglers can adapt to this change.

G. The EA states and then ignores the fact that flows alone adequately separate uses

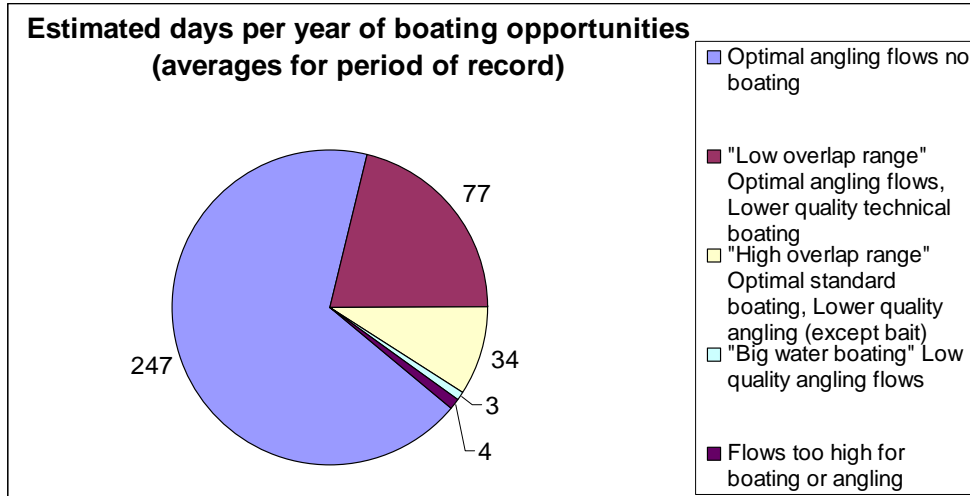
Of the tens of thousands of river miles in the United States that are attractive to anglers and paddlers, the Headwaters represent the only miles where floating is banned on such a Wild and Scenic River. Default management of the Headwaters does not include floating-access limitations because the natural water flow acts as a self-regulating mechanism by which the river is ideal for some uses, such as fishing, hiking, and swimming, when water levels are lower, and floating when the water levels are higher.

The EA clearly reports that natural flow alone adequately separates user groups on the Chattooga, as they do on every other river in the region:

Studies from many rivers show that different activities may be optimal and much more likely to occur at certain flows than others. In many cases, for example, whitewater boating occurs at higher flows (when the waves are larger and the hydraulics are more powerful) than wading based angling (because it is easier to wade and cross the river at lower flows).

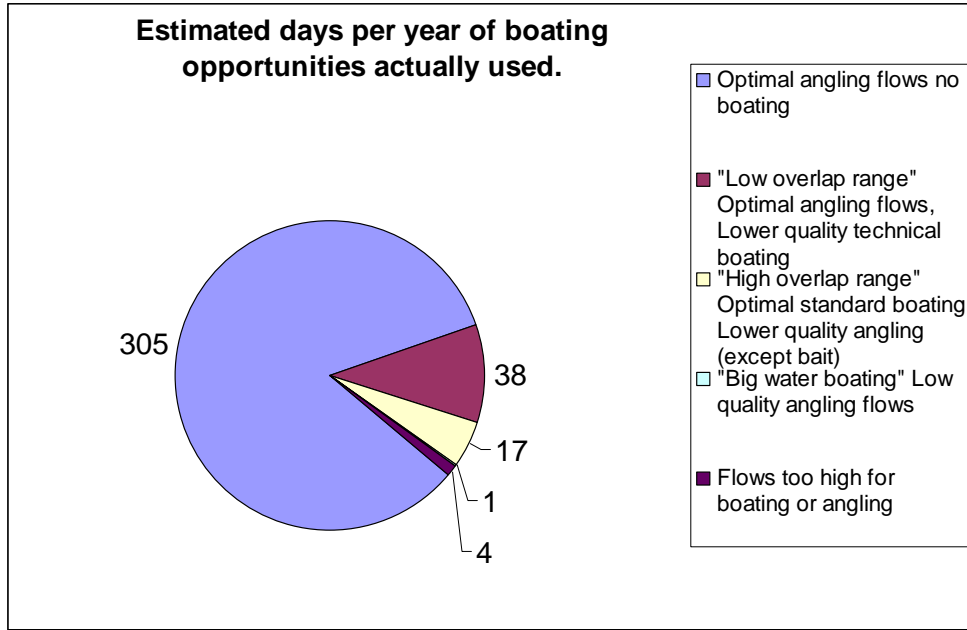
Whittaker and Shelby (2007) describes acceptable and optimal flows for different kinds of boating and angling opportunities, documenting when flows are better for one activity (and not the other), as well as when flow ranges for these activities overlap. The report provides greater detail about these flow ranges for different opportunities and segments, *but overall suggests that the highest quality fishing and boating generally occur in different parts of the hydrograph* (the exception is bait fishing, which remains optimal through higher flows). EA p. 117. (emphasis added)

The pie chart below is a reproduction from Shelby and Whittaker depicting this reality.



Assuming that the encounter standard between boaters and anglers is zero (i.e. a single encounter violates the standard, which is an extreme example), and that anglers see every group of paddlers (unlikely), unlimited boating would still come nowhere close to violating the USFS trigger for limiting use. If the encounter standards of Alternative 4 are used, the violations of these encounter standards between anglers and boaters would be miniscule. The USFS is clear in their selected management that only after encounter standards are violated on 20% of days would indirect limits be initiated – and only after these indirect limits fail would direct limits be instituted. Flows alone will manage recreational use interactions.

When other hydrologic factors are considered by Shelby and Whittaker, the authors predict that roughly half of these days will actually support whitewater boating because of hydrologic complexity. With these limiting factors included, the pie graph would look like this.



Source: Shelby and Whittaker 2007.

So without any limits to paddling whatsoever, anglers will have the river to themselves on *305 days each year*.

There is likely some overlap of technical boating and optimal angling flows. According to Shelby and Whittaker (2007) those conditions occur on roughly 77 days annually, half of which will be usable by paddlers. Thus, the only overlap that the USFS could even reasonably consider managing for is the 38 days of overlap which occurs at flows between 225 and 350 cfs. Thus, on 10% of days each year anglers might see one or more groups of paddlers.

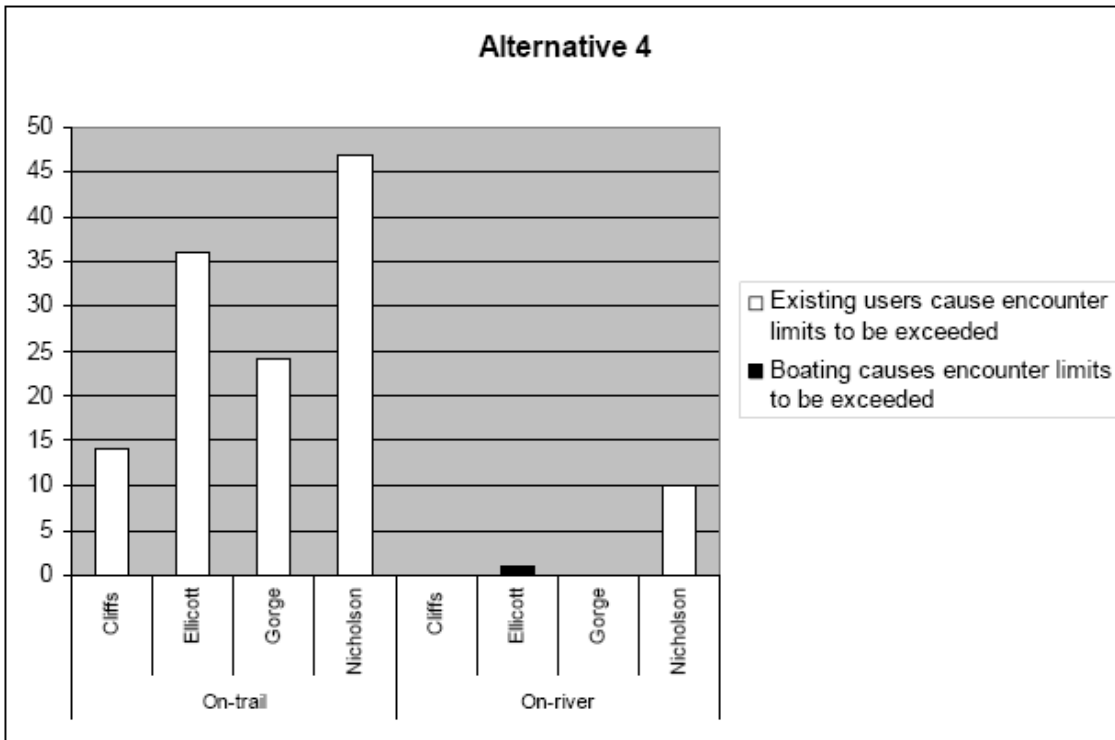
H. The USFS solution, allows recreational uses that already exceed its encounter standards to continue unabated, while the agency imposes absolute limits on the less impactful use of boating

The USFS clearly finds that encounter standards are already exceeded by existing users yet proposed no mitigation for these impacts. The EA states:

Based on existing use estimates and the above assumptions, the number of encounters currently occurring in the upper Chattooga on some days, especially in the wilderness, exceeds the threshold that typically defines solitude in wilderness and primitive backcountry settings. This is especially the case on weekends in the spring, summer and fall in most sections. EA p. 122.

For the USFS selected alternative and management regime the encounter standard violations are significant, as is made apparent in Figure 3.3.2, copied below.

Figure 3.3-2. Estimated Number Of Days Per Year On-Trail And On-River Encounters From Existing Users And Boaters Are Likely To Exceed Encounter Limits By Reach For Alternative 4.



As stated earlier in this document, when unlimited paddling is allowed under the standards of Alternative 4, and the USFS-created Scenic boating category is removed, the above graph does not change at all. Paddling causes encounter standards to be exceeded on only 2 days, roughly 1.5% of the total days on which standards are exceeded. Thus, all the seasonal, reach, and flow restrictions on paddling have no effect on encounters. Those limits have no benefits to other users – only senseless impacts on paddlers.

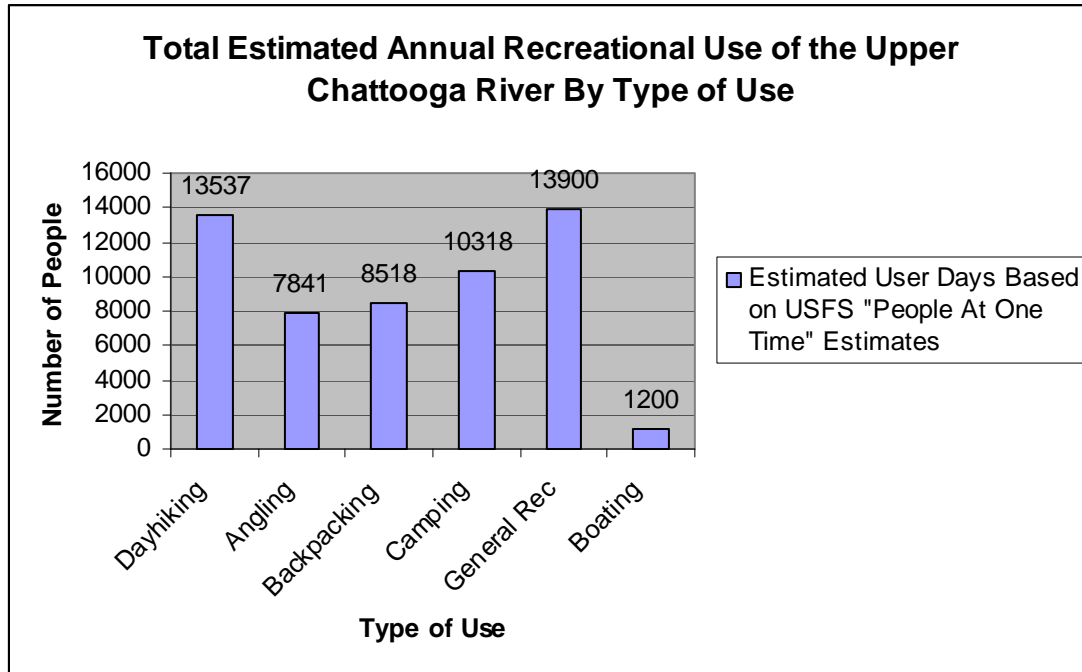
On a lesser note, the USFS chose to initiate limits on non-boating uses only when encounter violations exceeded 20% of days (73 days). This not only arbitrary, it is a clear sign that the USFS does not wish to curtail existing impacts. Indeed the EA readily admits that “the encounter limits established [in Alternative 8] for the Ellicott Rock Wilderness are closer to the desired tolerances in the literature (Whittaker and Shelby 2007) when compared to Alternatives 3-5. EA p. 142. That the USFS chose to limit paddlers based on encounters that have not occurred and will never reach 20% is an abuse of discretion.

I. The USFS limits paddling while failing to limit vastly larger and faster growing uses.

The USFS report titled “Upper Chattooga River Visitor Capacity Analysis Data Collection Reports” (COLBURN Ex. 22.) contains USFS staff’s estimates of use on the upper Chattooga. While the validity of this document could certainly be argued, the fact remains that it is the basis

for all of the USFS encounter standards and thus recreational use limitations. While never tabulated in the report or the EA, the results are stunning. If all of the data from the report are converted to People At One Time and considered on an annual basis, which significantly underestimates user days, the number is a staggering 54,114 people that currently visit the upper Chattooga River to hike, fish, camp, or backpack. In sharp contrast, Shelby and Whittaker (page 37) conclude that the total number of paddling user days “would probably not exceed 1,200.”

The graph below depicts the estimated annual recreational use on the upper Chattooga River, and is based wholly on USFS estimates.



*Note that the number of boaters is estimated user days, not estimated PAOT.

J. The USFS failed to consider and incorporate the comments of American Whitewater on the studies and reports that were ultimately addressed in the EA.

Throughout the development of the EA, American Whitewater participated fully in the regulatory process. American Whitewater commented on numerous studies and reports.⁵⁴ These

⁵⁴ American Whitewater's Comments on the "Chattooga River History Project Literature Review and Interview Summary" submitted on April 17, 2007; (COLBURN Ex. 23.)

American Whitewater's Comments and Suggested Revisions Regarding the Draft *Upper Chattooga River Phase I Data Collection Expert Panel Field Assessment Report*, dated February 2007, and first made available to the public on April 2, 2007; (COLBURN Ex. 24.)

comments were almost universally ignored and the USFS selected Alternative 4, which was a flawed decision for all the reasons stated above and in the comments of American Whitewater.

III CONCLUSION

The USFS preferred alternative and EA are flawed for a multitude of reasons. The agency's continued reliance on this flawed data and preconceived notions of how floating will affect the Upper Chattooga River constitute arbitrary and capricious conduct.

American Whitewater's Comments on the USFS Report titled "Capacities on other Wild and Scenic Rivers: seven case studies" submitted on May 7, 2007; (COLBURN Ex. 25.)

American Whitewater's Comments on Draft Environmental Impact Statement for the Revised Land and Resource Management Plan—Sumter National Forest; (COLBURN Ex. 26.)

American Whitewater's Comments on the USFS Report Titled Capacity and Conflict on the Upper Chattooga River and authored by Shelby and Whittaker, submitted on July 3rd, 2007; (COLBURN Ex. 27.)

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 9th day of October, 2009.

A handwritten signature in black ink, appearing to read 'K. R. Colburn', is written over a horizontal line.

Kevin R. Colburn